Ack'd: 18/12/63.

TANGANYIKA

MINISTRY OF HEALTH

# Annual Report

of the

# Health Division

## 1962

## VOLUME I

*Prepared by the Chief Medical Officer*

1963
PRINTED BY THE GOVERNMENT PRINTER
DAR ES SALAAM
*Price Shs. 4/-*

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## 1. GENERAL REVIEW

1.1. As in previous years this Report has been compiled at a time when detailed statistical information is not yet available. The collation and analysis of that information takes some time and the essential figures relating to the medical services will be published separately as Vol. II of the Annual Report. The few figures quoted in this part of the Report are as exact as possible in the circumstances, but they are of course incomplete and subject to confirmation and correction.

1.2. The medical services continued until the end of the year as a Division of the Ministry of Health and Labour, but in December the Ministry was once again split into the Ministry of Health and the Ministry of Labour.

1.3. There was no change in the administrative structure of the medical services, which continued to be organized on a regional basis. With the exception of the Regional Medical Officer of the Lake Region, all regional officers combined their administrative duties with certain other duties varying according to the need from region to region.

1.4. The services provided directly by the Health Division of the Ministry continued to be supplemented by those provided by voluntary agencies and local authorities.

1.5. Once again tribute must be paid to the Christian churches for their very substantial contribution to the health services. Building development continued, particularly in the Southern Highlands, Lake and Southern Regions, and further practical examples of co-operation between voluntary agencies and Government have been afforded by the take-over by the Christian Missions in Many Lands of the government dispensary at Tunduru, with responsibility for the provision of a district hospital service centred on Mbesa, and the opening by the Usambara Digo Lutheran Church of a mental hospital and farm at Irente near Lushoto, where suitable patients from the Mirembe Mental Hospital are referred for occupational treatment and rehabilitation. Other welcome developments have been the gradual extension of public health programmes centred on voluntary agency hospitals, and co-operation with local authorities in campaigns for the B.C.G. vaccination of children. Towards the end of the year the Working Party of the Mission Medical Committee was appointed by the Minister to consider and make recommendations on the means by which closer integration between government and voluntary agency medical services can be achieved. Increasing costs, particularly the upward revision of salaries and wages, have hit the voluntary agencies hard.

1.6. Reports on the effects of famine conditions were again received from several areas of the country.

1.7. Once again throughout the country the demands on the curative services have continued to increase. Again this has been particularly the case in respect of out-patients attending out-patient clinics and departments, and especially so in Dar es Salaam.

1.8. The major events in hospital construction were the completion of Phase I of Mwanza Hospital, i.e. the out-patient department, and new hospitals at Kasulu, Kyela and Handeni. Towards the end of the year work was about to commence on the new extensions to the Medical Training Centre at Dar es Salaam. These new extensions are designed to accommodate the Department of Human Biology of the new Medical School.

1.9. The major outbreaks of smallpox which had occurred during previous years came to an end in 1962. The overall incidence during the year was much lower than during 1961. One new and sharp outbreak of the disease occurred in the Kondoa District of the Central Region, but did not spread widely outside Kondoa and Mpwapwa Districts.

1.10. Considerable progress was made by the Swedish and Norwegian Save the Children Fund with their leprosy and rural health project in the West Lake Region. Towards the end of the year the hospital had been completed and work was in hand on the building of the Medical Aid School. Considerable progress was also made by the Church Missionary Society in the establishment of a new leprosy control centre at Hombolo.

1.11. Tuberculosis assumed an ever-increasing importance and the service had to expand in an endeavour to deal with the problem. Full details are given in the appropriate section of the Report.

1.12. Rabies continued to be endemic throughout the Southern Highlands Region and spread into the Central Region. Numerous persons presented themselves for treatment with a history of having been bitten by a dog suspected of having rabies. Precise statistics are not yet to hand.

1.13. Upgrading courses for medical assistants, dental assistants, assistant health inspectors and nurses continued throughout the year with considerable success. Considerable progress was also made in the planning of the course for students of the new Dar es Salaam Medical School to be opened in April, 1963. As a start in the augmentation of staff required to run the new School, two medical consultants and a biologist were appointed during the year. One of the medical consultants, who will be Director of Studies of the new School, was wholly financed by the Rockefeller Foundation. The second medical consultant is seconded from the London Hospital for Tropical Diseases with the aid of the Department of Technical Co-operation, whilst the biologist is a gift of Messrs. J. R. Geigy, S.A., of Basle, an arrangement made by Professor R. Geigy who has continued to devote much of his energy and interest to medical training schemes in Tanganyika. Professor Geigy's Rural Aid Centre at Ifakara again had a most successful session which lasted from July to October.

1.14. Estimates for the financial year 1961/62 totalled £2,047,257. The actual expenditure was £2,077,837, i.e. £30,580 over the estimate. This over-expenditure was partly covered by an excess of £11,736 in Appropriations-in-Aid, giving a net over-expenditure of £18,844. The main reason for exceeding the original estimate was the improvement in the recruitment position which led to many posts being filled earlier than anticipated. Expenditure on capital works was £250,000 out of an estimated expenditure of £291,506. Savings were due to delays in starting building.

1.15. After considering representations from the specialists it was decided to redesignate all specialists as "consultants". The term "specialist" will henceforth have no establishment connotation and may be used to describe medical officers engaged wholly or almost wholly on specialized duties and with post-graduate qualifications in their specialty.

1.16. An interesting event of the year was the visit to Tanganyika of members of a Survey Team appointed by the African Medical and Research Foundation in 1961. Their report was not available at the end of the year.

## 2. STAFF

2.1. Amongst the professional nursing and technical staff losses continued during the early months of the year but eased off very considerably later. The majority of these losses, especially in the case of medical personnel, are now caused by completion of contracts and reversions to the National Health Service and are therefore no longer mainly due to advantage being taken of the terms offered in the Secretary of State's Compensation Scheme.

2.2. During the year the overall improvement in the strengths of the various cadres of staff was considerable. At the end of the year there were 14 more doctors on the strength than at the end of the previous year. Unfortunately this improvement has eased staffing difficulties to only a limited extent owing to the increasing public demands on medical services and the large number of medical officers who are studying overseas for higher qualifications. The latter now amounts to some 10 per cent of the total strength. In addition the number of Assistant Medical Officers (i.e. medical assistants who have successfully undertaken an upgrading course at Dar es Salaam) increased from 22 to 33 during the period under review.

2.3. All specialist posts were filled with the exception of the Ophthalmologist. Unfortunately the person appointed to this post failed to appear and the person appointed in his place is not likely to arrive in Tanganyika until mid-1963. However, two ophthalmologists are now wholly employed in the Ophthalmic Department in Dar es Salaam.

2.4. Of all the cadres losses amongst the Sister Tutors was perhaps the most serious in its effect on the efficiency of the Health Division as a whole. At the end of the year only three Sister Tutors remained out of an establishment of nine. The position has been eased to some extent by the assistance given in the general nursing courses by four health educators provided by the World Health Organization.

2.5. Additions to qualified staff resulting from the various training schemes within the Ministry are described in some detail in para. 20 of the Report.

# 3. COMMUNICABLE DISEASES

## 3.1. Direct Infections

### 3.1.1. *Smallpox*

The epidemic prevalence of this disease in Dar es Salaam and the Eastern Region reported in the last Annual Report has now passed and in these areas the early months of the year saw the end of the outbreaks. In the Central Region there was a sharp outbreak in February, but this was largely confined to the Kondoa and Dodoma Districts and adjacent areas of the Northern Region. It is estimated that some 90 per cent of the population in these areas was vaccinated. The overall picture remains very similar to that described for 1961.

### 3.1.2. *Poliomyelitis*

The disease continues to occur sporadically throughout the country and there were sharp outbreaks at Sekonge in Tabora District when 36 cases occurred, mostly amongst children, in Ngara in the West Lake Region when 55 cases were notified, and in the Lake Region where some 102 cases with five deaths were notified during the year. Of the latter the largest number, representing over 50 per cent of all cases notified in the region, occurred in the Shinyanga District, mostly between mid-May and mid-August. Vaccination with Salk vaccine continues to be offered on repayment and Sabin vaccine has been used in campaigns at Dar es Salaam and Mwanza.

### 3.1.3. *Leprosy*

See Paragraph 18

### 3.1.4. *Tuberculosis*

See Paragraph 19

### 3.1.5. *Dysenteries and Enteric Fevers*

Enteric fever continues to be notified sporadically from all regions, but there was no major outbreak. The bacillary and amoebic dysenteries continue to be a major problem throughout the country. Special reports have been received from the regional medical officers on the high incidence of infection in the Njombe District of the Southern Highlands Region and in certain areas of the Lake Region.

### 3.1.6. *Trepanematosis*

Amongst the most interesting observations of the year has been that of Professor George Maan, of Vanderbilt University, who in the course of investigations primarily directed to the solution of certain cardio-vascular problems, observed that syphilis amongst the Masai is far less prevalent than has been supposed. The observation is of particular interest insofar as statements such as "syphilis is a major problem" or "the incidence of syphilis is very high" are commonly received from all areas of the country and it may well be that investigations of the nature carried out by Professor Mann may show these statements to be fallacious.

### 3.1.7. *Cerebro-spinal Meningitis*

No significant changes in incidence have been reported. From the Handeni Dirtrict comes a report to the effect that response to sulphadimidine has been poor (six deaths out of eight cases). There has been a sudden, inexplicable, but welcome drop in the number of cases reported from the Eastern Region. From an average of 40 during the previous five years only 11 cases were reported in 1962. There were no major outbreaks of the disease anywhere.

### 3.1.8. *Rabies*

The infected area of the country now includes the Central Region and the progressive spread of the disease amongst animals is a cause of anxiety. No human deaths have been reported from either the Central or Southern Highlands Region, at the time of writing. Five deaths have been reported from the Western Region.

### 3.1.9. *Anthrax*

As usual this disease appeared sporadically and there were small outbreaks following the ingestion of infected meat.

### 3.2. VECTOR BORNE DISEASES

#### 3.2.1. *Plague*

The Regional Medical Officer, Central Region, reports:—

"No cases of plague were confirmed in Central Region until December. A scare was reported from Iramba District in August, but no cases could be found on investigation. Dead rats were examined bacteriologically, but all results were negative.

During October and November vague reports of mysterious deaths filtered in from the Ihanja area of Singida District. Several investigations were carried out, but nothing conclusive could be found. However, on 6th December, two suspect cases—a father and son—were found in a hut at Kikhomango Village (Ihanja Chiefdom). They were seized by the Assistant Health Inspector and taken straight away to Singida Hospital, where they died within a few hours. Plague was subsequently confirmed.

Control measures (dusting with Lindane 1 per cent gamma, clearing of bush around huts, prophylactic administration of sulphathiazole, etc.) had already been commenced throughout the potentially infected area. Fortunately this area, approximately seven miles radius, was sparsely populated and cut off from other habitation by a forest belt. It was therefore not difficult to enforce quarantine. The control measures were combined with verbal propaganda. Once the people realized the personal danger they began to co-operate in control measures.

Although it is probable that a few deaths from plague had occurred before the two cases confirmed, no further cases (confirmed or suspected) were reported by the end of the year."

From the Northern Region is also reported an outbreak involving nine cases of which three died. The cases were not confirmed bacteriologically, but clinically there was little doubt as to the diagnosis.

#### 3.2.2. *Sleeping Sickness*

See Paragraph 15

#### 3.2.3. *Malaria*

See Paragraph 13

### 3.3. SCHISTOSOMIASIS

Research on this problem continues at the East African Institute for Medical Research at Mwanza and at the East African Institute of Malaria and Vector Borne Diseases at Amani. A full account of the activities of these units may be found in the annual reports of these research establishments.

## 4. MATERNAL AND CHILD HEALTH

4.1. Maternity services continued to be as popular as in previous years. There has, however, been relatively little increase in the utilization of these services, probably not because of any fall in the demand, but because the services are already working at maximum capacity. The vast majority of cases at most hospitals, as in the past, continued to be normal confinements, but there were the usual relatively large number of abnormal deliveries and deliveries requiring surgical intervention.

4.2. Ante-natal and child welfare clinics continued to increase in popularity, and this sector of the service has expanded both by the opening of the new clinics, and by increased attendances at existing clinics. At Tanga, for example, there were during the year some 12,000 attendances by mothers and 22,000 attendances by children at the clinics.

4.3. The part in the maternity and child welfare services played by the voluntary agencies continued to be of great importance, and there is little doubt that this is by far the fastest growing part of the voluntary agency medical service. Local authority rural health centres and dispensaries are also playing an important and expanding part in these services.

4.4. U.N.I.C.E.F. assistance in the form of dried skim milk, cod liver oil, triple antigen, and drug and diet supplements, continued to play a vital part in the maternal and child welfare services and undoubtedly is partially responsible for their increasing popularity.

4.5. Less gratifying is the fact that a number of the Land Rovers presented by U.N.I.C.E.F. for use in rural health centres, which play a most important part in the maternity and child health service, as they enable Health Nurses or Health Visitors to hold clinics at numbers of widely separated centres, are now approaching the end of their useful life; unfortunately, the financial position of most of the local authorities concerned is such that they cannot at present incur the capital outlay required to replace these vehicles.

## 5. SCHOOL HEALTH

5.1. There has been little change in the School Health Service since 1961. A formal school health service continued to be provided only within the City of Dar es Salaam, where it is provided by the Health Department of the City Council. Elsewhere, however, schools are visited whenever possible by medical officers and other members of the medical staff, but no formal inspections of school children are carried out.

5.2. The health of school children was generally good throughout the country, apart from the perennial problem of hookworm and bilharzia infection, both of which were present in a proportion of school children in very many areas. The extent of infection varies widely even in comparatively small geographical areas. It is difficult to decide what amount of morbidity is caused by these worm infestations, but investigation to determine this is in hand in Mwanza under the aegis of the British Medical Research Council, the Ross Institute and the East African Research Organization.

5.3. An interesting outbreak of disease was reported from the West Lake Region. This condition first appeared in a girls' school at Kashasha and later spread to a number of other schools in the vicinity. The disease, characterized by uncontrollable giggling and other bizarre behaviour, was diagnosed as mass hysteria by the investigating Consultant Physician.

5.4. The school feeding trial mentioned in the report for 1961 was brought to a successful conclusion in 1962. It will be discussed at length in the Nutrition Section of the Report.

## 6. HEALTH EDUCATION

6.1. The work of the Health Education Unit was hampered throughout the year by the lack of field staff. The Assistant Health Inspector seconded to the Unit left in April on selection for an up-grading course and it was not possible to replace him by another Assistant Health Inspector until some six months later. It was possible, however, to maintain a Health Visitor on the staff of the Unit throughout the year.

6.2. The plan for the bulk manufacture of the standardized Health Education teaching kit mentioned in the report for 1961 was held up by lack of funds. However, early in the year a delegation from the Scandinavian countries visited Tanganyika for the purpose of finding suitable objects for international aid; the delegation was favourably impressed by the kit and agreed to make the sum of £5,000 available for its bulk manufacture. This sum of money in due course reached the Health Education Unit towards the end of December, 1962, and work on the project was commenced immediately.

6.3. Early in the year work was started on the production of a series of 16 m.m. instructional films on the subject of maternity and child welfare and of nutritional interest, in co-operation with the Community Development section of the Ministry of Co-operative and Community Development. A cameraman from the film unit of the Section was seconded for this purpose, but unfortunately results were not wholly satisfactory and it was necessary to drop the project after some two months of trial.

6.4. A considerable amount of practical health education was carried out by various members of the public health staff in different parts of the country. In Lake Region private organizations, schools, and public meetings were lectured on a wide range of subjects of health interest, including the storage and methods of purifying water in the home, efficient utilization of food, nutritional problems, environmental hygiene and sanitation, and methods of preventing worm infestation. Similar activities took place in Central Region and here in addition the opportunity provided by a smallpox epidemic was utilized to stress the value of prophylactic vaccination. In all areas the lectures were particularly popular in schools and it is to be hoped that they will make an impact on the growing generation. They were also popular in literacy classes and similar groups organized by Community Development Officers and by T.A.N.U.

6.5. The Ross Institute was able to play only a relatively minor part in Health Education in the Tanga Region, as it was without the services of a Field Officer throughout the year.

## 7. NUTRITION AND FOOD SUPPLIES

7.1. The general impression gained this year is that a far greater awareness of nutritional problems is developing. This has probably partly been an extension of the world-wide interest in nutrition resulting from the launching of the various international campaigns, but possibly more to local efforts which have stimulated a wider interest in nutrition. The main problem nevertheless remains the lack of a widespread understanding of the necessity for a varied, balanced and nutritious diet to ensure a society of healthy and productive individuals.

7.2. The staff of the Nutrition Unit was greatly strengthened in January with the appointment for the first time of two Nutrition Officers. The first, a Makerere Diplomate, was formerly a science teacher at a secondary school and the second had for some years been an Agricultural Instructor at Ukiriguru. It is believed that these different backgrounds will prove extremely useful in their new posts, education and agriculture being two important facets of nutrition extension work.

7.3. This year, like 1961, has seen food shortages in many parts of the country. Prior to the harvest in 1962 there were many widely scattered districts receiving famine supplies. This was the tail-end of the 1961 drought, which had caused the worst famine for many years with not only extensive crop failures, but also death to many thousands of cattle. Famine in 1962 was not due to lack of rain and in fact early in the year exceptionally heavy rain was the cause of food shortages. Much of the Rufiji District was flooded and emergency measures, including the use of aircraft, were taken to supply food to villagers. During much of the year famine conditions existed in most parts of the Central Region following severe insect damage to food crops. Again famine relief measures were instituted, the main supplies being maize donated by the United States. It is to the credit of all concerned that no deaths directly attributable to starvation are known to have occurred.

7.4. The birth of the self-help movement and the springing up of many nation-building projects in different guises in all parts of the country, stimulated the Medical Officer (Nutrition) to produce a booklet entitled "Nutrition as Part of Village Self-help and Development Plans". This was published in English and Swahili in an attempt to channel some of the self-help enthusiasm into projects which will help improve the nutritional status of the people at a village level.

7.5. In August the Tanganyika Government acted as hosts for a 28-day Nutrition Seminar which was held in Arusha under the auspices of F.A.O. and U.N.I.C.E.F. This was attended by delegates from a number of African countries. The local arrangements, the various field trips and recreational visits, as well as some of the lecturing, was undertaken by the Medical Officer (Nutrition), who acted as Liaison Officer and Seminar Co-director. The Seminar was opened by the Minister for Health and Labour, the Honourable Mr. M. M. Kamaliza, and during the closing stages the Prime Minister the Hon. Mr. Rashidi Kawawa, held a reception for the staff and delegates of the Seminar.

7.6. In November the Medical Officer (Nutrition) attended a U.N.I.C.E.F. Seminar on "Village Level Infant Feeding" at Makerere University College in Kampala and presented a paper on "Protein Foods available for Children in East Africa".

7.7. This year a new line of attack was launched on certain nutritional problems which face the urban population. An allotment system was worked out by the Medical Officer (Nutrition) with the assistance of the Lands Division. As a result a number of the larger towns are now allocating small plots for cultivation within allotment areas. This will enable town dwellers to cultivate some protective foods near to their homes.

7.8. Legislation was drawn up to ensure an adequate vitamin level in all milled cereal flours. This legislation when in force should prove a valuable public health measure in preventing the increasing incidence of clinical conditions due to Vitamin B deficiencies. This has resulted mainly from the rapid spread in the popularity of highly refined Sembe Maize flour.

7.9. The Nutrition Unit has in 1962 placed a much greater emphasis on field work. During the last nine months of the year the Medical Officer (Nutrition) spent a total of 79 nights away from Dar es Salaam.

7.10. During the year nutrition surveys were carried out in parts of Rufiji, Dodoma and Kondoa Districts. The survey in the Rufiji area was carried out at a time when much of the area was flooded; the visits to the scattered, inundated communities was made possible by having the use of a United States Army helicopter. The survey revealed an average of 2·3 signs of malnutrition per person the signs being more frequent in the flooded areas near the river. There was no evidence of gross starvation.

7.11. The surveys in the Dodoma and Kondoa Districts were also carried out during a time of acute food shortage, the whole Central Region being in the throes of a second year of famine with 333,273 adult units receiving free famine relief food at that time. A total of 360 persons at six different places were examined and showed an average of 2·35 signs of malnutrition per person. The signs found were mainly due to lack of Vitamin A, the B group of Vitamins and protein in the diet. The majority of people, especially for some undetermined reason the mean, were grossly underweight. An outbreak of pellagra was found to be taking place at Suruke a few miles from Kondoa Irangi.

7.12. The school feeding trial which had been started in 1961 was concluded in July, 1962. This project was undertaken to evaluate the benefit to children of the consumption of a mid-day snack providing each pupil with 25 grams of protein per day. The vast majority of the 450,948 primary school children in Tanganyika get up early in order to walk long distances to reach their schools. Many of them have nothing to eat before they leave and they often get their first and sometimes only meal of the day when they return home late in the afternoon. In this trial six different products capable of production in Tanganyika and costing less than 20 cents per pupil per day were utilized. The results of the trial showed a definite physical benefit in the form of a greater gain in weight, height and haemoglobin in the groups receiving protein than in the control group. It appeared also that there was an improvement in concentration and learning capacity and certainly absenteeism was reduced.

7.13. An investigation was also begun of the possible toxic effects to man of the fungus *Aspergillus flavus*, a very common contaminant of groundnuts here. This fungus has recently been shown to be the cause of liver disease in poultry in Britain and elsewhere. An attempt was therefore made to ascertain whether there was any correlation between areas of high groundnut consumption and the incidence of liver disease in man. However, the figures available were not large enough to be statistically significant. Investigations are now being undertaken in Dar es Salaam to ascertain whether the consumption of infected groundnuts over a long period might be a factor in the aetiology of fibrosis of the liver which is very common here.

7.14. During August eight prisoners were admitted to the Dar es Salaam Hospital from Ukonga Prison with an ataxic neuropathy. They were treated with Vitamin B complex and slowly responded. The Medical Officer (Nutrition) carried out a detailed investigation of the diet of these prisoners and this revealed that the condition was almost certainly due to a deficiency of "B" vitamins and that the immediate cause had been a change from dona maize meal to highly refined sembe maize meal as the staple. These cases were very similar to those from the Rufiji described by Doctors Haddock, Ibrahim and Kapur in an article on "Ataxic Neurological Syndrome found in Tanganyika" in the British Medical Journal in December. However, in their cases, as with all previously recorded cases from Africa, an anlysis of the diet had not been possible. The Ukonga investigation has, therefore, revealed the nutritional aetiology of this condition.

7.15. The Medical Officer (Nutrition) in addition to the surveys, trials and investigations mentioned above, continued to collect data on the heights and weights of school children, began to collate records and existing knowledge of food habits and taboos in Tanganyika, started an anlysis of birth weights from three regions, and for the first time extensively recorded the skinfold thickness measurements of Tanganyika Africans.

7.16. Investigations and research in the field of nutrition were also carried out in Tanganyika in 1962 by individuals and organizations not directly linked with Government. Among these was a team headed by Dr. Keller from the Max Planck Institute of Germany. They made a study of the nutrition of the Wameru and Wambulu tribes of the Northern Region of Tanganyika.

7.17. In mid-1962 Dr. G. Mann, Research Professor from Vanderbilt University, U.S.A., together with some colleagues, undertook a study to ascertain whether the Masai's high intake of animal fat had the same adverse effect on their cardio-vascular systems as this is believed to have in America. The electro-cardiographs and results of serum electrophoresis, the cholesterol estimations and other data collected are now being analysed at Vanderbilt University.

7.18. The Nutrition Unit continued to draw up diet sheets for a large number of institutions. Early in the year a new hospital diet scale was prepared and this has been adopted in all government hospitals. Advice was sought and given concerning diets for very varied organizations. These included diets for the labour force of the Tanganyika Planting Company, for educational institutions at Tengeru, East Lake and elsewhere, for the refugees' settlements of the Ruanda at Ngara and the Kikuyu at Mpanda, for the prisons of Tanganyika, the tuberculosis soup kitchen in Dar es Salaam and many others.

7.19. As in previous years malnutrition was a serious cause of morbidity and mortality especially among young children. There is no doubt that protein calorie malnutrition is still by far the most important and widespread nutritional disease in Tanganyika. The recorded statistics for cases of Kwashiorkor treated in hospitals over the last three years shows almost a threefold increase. It is believed that this rise indicates a greater awareness of this disease rather than an increased incidence, and even now it represents only a small fraction of the total number of cases which occur in Tanganyika each year.

7.20. Nutritional marasmus is also frequently seen and the incidence is likely to increase greatly if the pernicious tendency to bottle feed rather than breast feed infants gets a grip on the country before the economic status of the people reaches a level where this type of feeding becomes a practical and fairly safe procedure.

7.21. Pellagra occurs sporadically in many parts of the country and with the increasing replacement of millet by maize as the staple foodstuff of many areas this disease is likely to increase. A serious outbreak of Pellagra occurred near Kondoa Irangi in the second half of the year with a total of 176 cases diagnosed.

7.22. Vitamin B deficiency states appear to be increasing especially in urban and peri-urban areas. This is directly attributable to the rapid spread in the popularity of highly refined vitamin-deficient sembe maize meal as opposed to less refined dona maize meal.

7.23. Xerophthalmia and other conditions due to vitamin A deficiency are encountered especially in the more arid areas such as much of the Central Region.

7.24. Although scurvy as such is uncommon there is no doubt that much of the population has a low intake of vitamin C and this may play a part in contributing to the slow healing of wounds and ulcers.

7.25. Anaemia is a very frequent cause of morbidity throughout the country. The two main nutritional causes of this are firstly a deficiency of iron, usually it is believed secondary to parasitism, pregnancy, childbirth and so on and secondly to a deficiency in the diet of protein or of certain amino acids necessary for the proper synthesis of red blood cells.

7.26. Despite the many other calls on the Medical Officer (Nutrition) and his staff one of their main functions has remained that of nutrition education. This included formal courses of lectures given by the Medical Officer (Nutrition) to the Nutrition Officers, the final year Medical Assistants and Assistant Health Inspector students, as well as to the up-grading courses for Assistant Medical Officers, Health Inspectors and Nurses. The Medical Officer (Nutrition) also gave a series of six lectures to a U.N.E.S.C.O. course for teachers at Mpwapwa, lectured the Peace Corps nurses and two of the Community Development and one of the Orientation courses at Tengeru.

7.27. Education of the public was one of the prime duties of the nutrition teacher, Miss M. Ndonde. She devoted her time mainly to groups at Community Centres, Women's Clubs and so on, her talks often being illustrated with practical demonstrations. Towards the end of the year the Nutrition Officers were also engaged in this type of work, one of them having been transferred to the Central Region.

7.28. In December the inaugural meeting of the National Freedom from Hunger Committee for Tanganyika was held. It was tentatively agreed at this meeting that this new body should take over the functions of the Central Advisory Committee on Nutrition. The advantages of this are that it will have a Cabinet Minister as Chairman, it will have better access to funds raised by the world-wide campaign being launched under that title, and through sub-committess in the regions and districts there will exist definite channels along which decisions taken in Dar es Salaam can proceed for implementation in the villages.

## 8. ENVIRONMENTAL HYGIENE

### 8.1. URBAN HOUSING AND SANITATION

8.1.1. In the high density areas of most towns improvements in the standards of housing continued with increasing momentum. Materials of a more permanent nature are gradually replacing the traditional mud and pole construction. When no improvement in general construction has been possible many people have replaced their thatch and "tembe" roofs with corrugated iron sheets.

8.1.2. Although new houses are in general being built to more acceptable standards, the demand for housing frequently still leads to overcrowding. In peri-urban settlements where powers of coercion are weak, building standards are very low. It is to be hoped that this problem receives the attention it deserves from the newly formed district councils.

8.1.3. Although urban refuse collection remains reasonably satisfactory, the continuing rise in the cost of labour is causing some of the smaller and more impecunious local authorities to cut their labour force still further. As stated in last year's report, one of the first effects of such a cut is deterioration in the cleanliness of the township.

8.1.4. Reference was made in the last Annual Report to the problem of sewage disposal. This problem grows steadily worse with the increase in size of buildings now being erected in the townships. Pending the installation of sewage systems little can be done to obviate nuisances other than ensuring that no over-building is permitted on whatever pretext.

8.1.5. Water supplies in townships continued to be satisfactory in quantity on the whole, but quality still remains subject to criticism. There are few places in Tanganyika where water drawn from a piped supply may consistently be drunk unboiled with impunity.

### 8.2. RURAL SANITATION

8.2.1. The continued emphasis on training programmes for Assistant Health Inspectors to fit them for qualification as Health Inspectors continues to interfere with the wide deployment of health staff in rural areas, a deployment which is the long term objective of the Division. It is estimated that a considerable improvement to the staff position will be seen during the forthcoming year.

8.2.2. The leaders of small rural communities place great emphasis on measures designed to improve environmental sanitation, and such measures have appeared in rural nation-building projects. Such developments are of the greatest significance and basically perhaps present the only real hope of substantial improvement in rural sanitation.

### 8.3. FOOD HYGIENE

8.3.1. The regular inspection of premises in which food is exposed for sale continued to be exercised.

8.3.2. Butchers' shops have received more than their usual share of attention and it is pleasing to be able to report considerable improvement in some areas.

8.3.3. Generally, as usual, inspection of foods has been carried out with reasonable co-operation from the trades-people, and in almost all cases unsound food found unfit for human consumption has been surrendered voluntarily for destruction, thus obviating the necessity for taking it before a magistrate for condemnation.

## 9. INDUSTRIAL HEALTH

9.1. The health of employees has remained reasonably good in most areas. There have been no major outbreaks of epidemic or occupational disease amongst those employed on large estates and in the various industrial concerns of the country. Malnutrition amongst urban workers continues to be a problem. Generally speaking this malnutrition is due to a preference for the more sophisticated foodstuffs and to lack of knowledge of the constituents of a proper diet; its solution can only result from improved health education (vide "Nutrition").

9.2. No industrial diseases as yet present a serious or widespread problem in Tanganyika. There have been reports of occasional cases of anthrax amongst hide sorters.

## 10. INTERNATIONAL AND PORT HEALTH

10.1. No cases of internationally notifiable disease were landed from or reported on any ship or aircraft entering any of the country's ports or airports during the year. The routine clearance of ocean-going ships, schooners and dhows continued as in previous years, but with a slight decline in the numbers of vessels, except in the case of dhows.

10.2. Four cases of minor infectious disease were landed from ships in Dar es Salaam and isolated in private homes.

10.3. There has again been a considerable increase in the importation of second-hand clothing. The number of consigments has decreased, but these have been much larger. A total of 12,171 bales or packages was imported.

## 11. HEALTH OF PRISONERS

11.1. Arrangements exist for the medical supervision of prisoners and it is pleasing to report that the health record of prisoners was generally excellent during 1962. No major outbreaks of any infectious disease occurred. There was a minor outbreak of cerebro-spinal meningitis in the small prison at Mikumi in the Eastern Region; this prison has a record of previous similar outbreaks and as it was an unsatisfactory building it was permanently closed. There was also a small outbreak of gastro-enteritis at Maweni Prison in Tanga Region, caused by eating infected meat; steps have been taken to ensure that meat supplies are more carefully inspected before issue in the future.

11.2. The problem of overcrowding of prisons referred to in previous Annual Reports was to some extent alleviated during the year as a result of the amnesty to prisoners declared as part of the Independence Celebrations.

## 12. HOSPITALS

### 12.1. DAR ES SALAAM HOSPITALS

12.1.1. The most important change in the arrangement of this hospital group was the conversion of the Ocean Road Hospital into a maternity hospital, forecast in the report for 1961. The Ocean Road Hospital now provides one hundred and twenty obstetric beds—the majority of them Grade IV, but with provision for Grade I and Grade II patients. The Muhimbili wards in which Grade IV maternity patients were formerly accommodated have now been closed with the exception of 28 infectious disease beds. The amenity beds in the general ward blocks have been recategorized as Grade I and Grade II beds and have replaced the Grade I accommodation formerly available at the Ocean Road Hospital. These alterations required only minor modification of kitchen and sanitary arrangements and the expenditure involved was relatively trivial.

12.1.2. During the year the facilities of the physiotherapy department were improved by the provision of a pool for hydrotherapy. This pool was built and presented by Caltex Limited. Unfortunately it has not yet proved possible to bring it into service as even in Dar es Salaam the water has been found to be too cold for comfort and there is as yet no provision for heating it.

12.1.3. Out-patient attendances at hospitals, with the exception of ante- and post-natal cases, are limited to referred cases and casualties, and the main out-patient services are provided at out-patient dispensaries in various parts of the town. Pressure on these out-patient facilities, already intense in 1961, has increased considerably, and they are now working at well beyond their maximum capacity for providing an efficient service. The attendances of new cases at these units rose to 372,430 in 1962 as compared with 227,024 in 1961, and total attendances amounted to 1,127,185 as compared with 909,918 in 1961. It is estimated that a large proportion of the almost 50 per cent increase in new attendances is made up of persons suffering from trivial complaints who do not really need to attend hospital at all, but no effective way of discouraging such unnecessary attendances has yet been discovered.

## 12.2. District Hospital Services

### 12.2.1. *Central Region*

There were no major alterations at the main hospital in the region, at Dodoma, but by a reorganization of the existing accommodation, and the transfer of Grade II accommodation to the annexe at Sandy Hill, it was possible to provide a satisfactory children's ward with accommodation for 16 cots. A further six beds were made available for persons suffering from tuberculosis, by utilizing for this purpose the six-bed prison ward. This ward was not much used for the accommodation of prisoners and in any event its relative isolation makes it unsuitable for providing the intensive medical or nursing care which is necessary for prisoners who are so sick as to require admission to hospital. Prisoners suffering from less serious illness can satisfactorily be treated in the prison sick-bay. It is interesting to note that although the daily average number of in-patients in the general beds of the hospital remained almost the same, 138·86 in 1962, as compared with 136·00 in the previous year, there has been a considerable fall in out-patient attendances; first attendances fell from 51,045 in 1961 to 47,127 and total attendances from 162,359 to 151,844.

Elsewhere in the region, Singida hospital was provided with an X-ray set, which enabled it to play a very useful part in the regional tuberculosis control scheme. The hospital worked to more than full capacity, its average daily bed state throughout the year being 65·5 in a nominal capacity of 60 beds.

The old hospital at Mpwapwa was under very considerable pressure and the opening early in 1963 of its new replacement, with 60 beds as compared with 32 beds in the existing hospital is eagerly awaited.

The condition of the hospital buildings at Kondoa gave considerable cause for concern and at the beginning of the wet season it was necessary to evacuate and demolish two of the wards as they were in imminent danger of collapse.

### 12.2.2. *Eastern Region*

The hospitals at Morogoro, Kilosa and Utete continued under the charge of medical officers throughout the year. The smaller hospital at Mahenge has been under the charge of an Assistant Medical Officer since the middle of 1961 and he has carried out his duties very successfully. An Assistant Medical Officer was placed in charge of the small hospital at Bagamoyo also, during the year. All hospitals continued to be busy.

The new small hospital at Kisarawe which was mentioned in the report for 1961 was almost complete at the end of 1962. It is intended that this hospital, when completed, should function as an extension of the Dar es Salaam hospital group, and be under the administrative charge of the Medical Superintendent.

### 12.2.3. *Lake Region*

In this region, in addition to the regional hospital at Mwanza, there are hospitals at Musoma, Maswa, Shinyanga, Geita and Ukerewe which continued under the charge of Medical Officers throughout the year, a new 60-bed hospital at Tarime, which is functioning effectively under the charge of an Assistant Medical Officer, and a bedded dispensary at Ngudu in Kwimba District under the charge of a Senior Medical Assistant. The opening of the new out-patient department at Mwanza was considerably delayed as heavy rains early in the year resulted in partial collapse of the foundations and severe damage to the building. By the end of the year this damage had been rectified and the building was almost ready for occupation.

Planning proceeded with Phase II of Mwanza hospital, i.e. the in-patient accommodation and ancillary services, but for financial reasons it proved impossible to proceed beyond the preliminary planning stage during the year.

### 12.2.4. *Northern Region*

Most of the hospitals in this region showed a considerable increase in work-load. In Arusha admissions rose to 6,820 compared with 5,633 in 1961 and new out-patient attendances rose to 85,848 compared with 60,709; on the other hand, total out-patient attendances fell from 172,193 in 1961 to 155,980 in 1962; a most noticeable rise has been in the number of hospital confinements—748 in 1960, 1,042 in 1961 and 1,239 in 1962. In Moshi total out-patient attendances rose by 54,721 to 229,314; the number of admissions showed a slight though insignificant fall, but the daily average bed state showed a rise from 234·14 in 1961 to 250·72, possibly indicating a larger proportion of seriously ill patients.

The number of confinements remained much the same, 1,600 of which 310 were complicated compared with 1,579 of which 224 were complicated in 1961; with only 10 maternity beds this figure must be taken as indicating that absolute maximum capacity has been reached. Mbulu shows an even more dramatic increase; out-patient new cases rose from 18,937 in 1961 to 33,850 and total attendances from 48,467 to 81,506. Admissions rose from 3,060 to 3,585, but daily average bed state was maintained at 113·99 compared with 110·43 in 1961. An exception to the general rule was Monduli where a quite noticeable falling off was shown in the second half of the year; admissions were 10 per cent lower than in 1961 although out-patient attendances were maintained and in fact, over the year, showed a 5 per cent increase.

Only minor alterations to hospital buildings were possible. In Arusha, part of the very large Grade I unit was redesignated as Grade II accommodation and the ward formerly used to accommodate Grade II patients was converted to a children's ward. In Moshi, the continuing decrease in the demand for Grade I beds made it possible to close Kibo Hospital in-patient facilities in November, 1962, with resultant useful economies in staff utilization; the hospital continues to provide a Grade I out-patient service.

### 12.2.5. *Southern Region*

The hand-over of the bedded dispensary at Tunduru to the Christian Missions in Many Lands, forecast in the 1961 Annual Report, was effected in August, 1962. The base hospital at Mbesa now functions as the main hospital for this district and the mission continues to maintain bedded dispensary facilities at Tunduru under the charge of a mission medical worker. The hospitals at Lindi, Mtwara, Nachingwea, Songea and Kilwa remained under the charge of Medical Officers throughout the year, but it was necessary to place the hospital at Newala in the charge of an Assistant Medical Officer towards the end of 1962. With the exception of Mtwara, which with 59 beds had an average daily bed state of 70·5, none of the hospitals in the region was working at much over 75 per cent of capacity. It is probable that the reason for this is the large number of voluntary agency hospitals in the region, these hospitals being, generally speaking, extremely popular with the general public.

### 12.2.6. *Southern Highlands Region*

There is considerable progress to report from this region. The new hospitals at Tukuyu and Kyela were both completed and opened during the year and are already working at full capacity. The Grade I hospital at Iringa, after minor building modifications, was also opened during the year. In Mbeya, one new 26-bed ward and in Njombe two new wards, one of 26 beds and one of 30 beds, were also completed. In spite of all these increases, it is stated that the pressure on available accommodation continues to be heavy.

### 12.2.7. *Tanga Region*

Out-patient attendances at Tanga seem to have reached a ceiling, remaining almost the same as 1961 at approximately 300,000 attendances and 87,400 new cases. It is probable that this ceiling is fixed not so much by the demand as by the physical incapacity of the resources available to cope with any large numbers. Tanga hospital, the second largest hospital in the country, continued to be a very busy unit, the only part of its work showing any diminution being the maternity section where confinements fell by about 200 to 1,190; this total included a fair proportion of abnormal midwifery, shown by the fact that there were 9 maternal and 37 infant deaths, with 65 still-births. In addition there were 140 deliveries in Grade I and Grade II accommodation compared with 141 in 1961; in this group there were no maternal deaths, 13 abnormal deliveries and 7 still-births.

The new hospital at Handeni was completed in the latter part of the year and was officially opened by the Minister for Health in November. It has already proved to be a very popular unit.

The remaining hospitals in the region, at Korogwe, Lushoto, Muheza, Pangani and Same continued to be popular. The hospital at Lushoto was enlarged by the conversion of a P.W.D. store into a very satisfactory ward. Towards the end of the year, the people of the area, as a memorial to the inception of the Republic of Tanganyika, raised funds for the construction of a 30-bedded tuberculosis ward; building is already under way and is proceeding apace.

In addition to the hospitals there is in this region a very busy bedded dispensary at Usangi. This unit is now designated as a government rural health centre and is distinguished by the fact that out-patient attendances are second only to Tanga. Particularly noticeable is the very large attendance of female out-patients at this unit, and also its flourishing maternal and child welfare work.

### 12.2.8. *Western Region*

There was no development or expansion of the hospital services in this region during the year, but all hospitals continued to be very busy. Towards the end of the year funds were released for the completion of the hospital at Mpanda and arrangements were made for building to commence early in 1963. The bedded dispensary at Mpanda has been under particular pressure during the year due to the siting of the Kikuyu resettlement scheme at Katuma in Mpanda District. A population of some 3,000 settlers, including many women and children, created a considerable medical problem in this area, particularly as they had come from a non-malarious area and had relatively little premunition to this disease.

### 12.2.9. *West Lake Region*

The only alteration in hospital facilities in this region was the regrading of the amenity accommodation at Bukoba into Grade I and Grade II beds. All hospitals continued to be busy and in Bukoba, in particular, out-patient attendances totalled 46,500, an increase of 15,000 over 1961, while admissions increased from 2,766 to 3,671.

## 13. THE MALARIA SERVICE

### 13.1. General Review of the Year

13.1.1. Mosquito and malaria control programmes in the larger settlements during 1962 continued to be based on drainage and larviciding, anti-malaria oil containing D.D.T. being applied from knapsack sprayers or, in certain circumstances, destruction of mosquito larvae being achieved by the use of B.H.C. powder distributed from rotary dustguns. The control of culicines breeding in peri-domestic waste water remained an important aspect of urban mosquito measures.

13.1.2. Execution of these programmes was entrusted to Malaria Assistants or Orderlies working closely with other staff of the urban health offices. The operations in the Western, East Lake and Lake Regions were inspected regularly by the Malaria Field Officers, based on Tabora and Mwanza, while work elsewhere in Tanganyika was visited by the Consultant Malariologist, an Entomologist, or one of the two Field Officers stationed at the Malaria Service laboratory at Morogoro. One Entomologist continued to be assigned throughout the year to the study of the snail vectors of bilharzia, working with the Bilharzia Team of the East African Institute for Medical Research at Mwanza, while the other, based on Morogoro, in addition to his routine mosquito control work, re-opened the investigation of the rodent and flea vectors of plague that had been commenced by his predecessor in 1957.

13.1.3. In support of the national mosquito and malaria control campaigns, trials of insecticides and spraying equipment continued to form an important part of the work of the Malaria Service. Investigation of the efficacy of new suppressive anti-malarial drugs included tests among infected semi-immune children of three tasteless chloroquine compounds, and the large-scale trial of chloroquinized salt among the inhabitants of the isolated settlement of Mto wa Mbu; this trial, which is supported in part by a grant from the World Health Organization, is proving successful and popular.

13.1.4. The teaching of malaria control methods remained a duty of the Service, three courses being provided for the benefit of Assistant Health Inspectors at the Medical Training Centre in Dar es Salaam.

### 13.2. Training Courses

13.2.1. The Malaria Service provided training courses at the Medical Training Centre in Dar es Salaam for three groups of Assistant Health Inspectors as follows:—

| | | | |
|---|---|---|---|
| Up-grading course ... ... | 5.2.62 | to | 10.2.62 |
| Normal Training course ... | 24.4.62 | to | 4.5.62 |
| Up-grading course ... ... | 5.11.62 | to | 17.11.62 |

13.2.2. In the Malaria Service laboratory and in the field at Morogoro, a Malaria Assistants, technical refresher course was held from 4.4.62 to 18.4.62 and two Malaria Orderlies were given instruction, one for the Kilombero Sugar Company and the other for the Morogoro Town Council.

13.2.3. In addition, two officers undertook overseas courses during the year, courses that will be completed in 1963. These were:

(a) Dr. D. F. Clyde, Faculty of Medicine, London University. Reading towards D. Phil. degree in Malaria (privately, from October, 1962).

(b) Mr. A. S. Msangi, London School of Hygiene. Studying for Diploma in Applied Parasitology and Entomology. (Commonwealth Scholarship.)

### 13.3. Scientific Publications produced by Members of the Malaria Service

Clyde, D. F. (1962) "Chemotherapy of Malaria" (Review) *East African Medical Journal*, 39, 76–77.

Clyde, D. F. (1962) "Malaria Distribution in Tanganyika, Part I". *East African Medical Journal*, 39, 528–535.

Clyde, D. F. (1962) "Mass suppression of Malaria using a mixture of 4- and 8-aminoquinolines in Tanganyika". *Bulletin of the World Health Organization*, in press.

Clyde, D. F. (1962) "History of the Medical Services of Tanganyika". Book, printed and published by the Government Printer, Dar es Salaam, with a foreword by Dr. Julius K. Nyerere.

Webbe, G. (1962) "Population studies of intermediate hosts in relation to transmission of bilharziasis in East Africa". Ciba Foundation Symposium on Bilharziasis, Cairo, 1962, published by J. and A. Churchill Ltd., London.

Webbe, G. (1962) "The transmission of Schistosoma haematobium in an area of Lake Province, Tanganyika, Part I: General considerations and ecology of snail habitats, Part II: Biology of the principal molluscan host, Part III: Snail population dynamics". *Bulletin of the World Health Organization*, in press.

Webbe, G. and Read W. W. C. (1962). "The use of Cobalt 60 for labelling snails in the study of field populations". *Annals of Tropical Medicine and Parasitology*, 56 No. 2.

13.4. During 1962 the control of malaria, principally by the use of mosquito larvicides and drainage, continued to be the principal duty of the Malaria Service, although considerable attention was also paid to the use of chemotherapeutic agents for the suppression of malaria among large groups of people. The snail vectors of bilharzia continued to be studied by the Entomologist at Mwanza, and to a lesser extent by the Entomologist at Morogoro, and the latter was engaged in the classification of the rodent and flea vectors of plague in addition to his mosquito control duties.

### 13.5. Plague

13.5.1. The flea fauna of field and domestic rodents had already been the subject of detailed investigation by a former Entomologist in the years 1957 and 1958, although much of the data was not published. The present work is a continuation and extension of this survey. During 1962 the study was limited to the flea fauna of domestic and wild rodents in and around Morogoro, partly in order to confirm the earlier findings and partly to regain the necessary skills.

13.5.2. In the Morogoro area during 1962, 225 domestic rodents were caught in houses by means of baited cage-type traps. Two were *Mastomys coucha*, the multimammate rat, and the remainder *Rattus rattus*. The flea index proved to be 2·8: *Xenopsylla brasiliensis* and *cheopsis* comprised 68 and 29 per cent of the fleas respectively, and 3 per cent were *Echidnophaga gallinacea*. One specimen of *Ctenocephalides felis* was also found on *Rattus rattus*.

13.5.3. Of 140 field rodents caught, 66 per cent were *Mastomys coucha*, and 20 and 14 per cent respectively *Tatera* and *Dendromus* species. Most of the field rodents were heavily infested with mites of the genus *Echinolaelaps*, but only a few with fleas. *X. brasiliensis* was found on one *Mastomys* and seven *Tatera*, and *Leptopsylla* species as a single specimen on one *Dendromus*.

13.5.4. Although the proportions of rodents and fleas of different species proved to be similar in 1962 to those found in 1957-58, it is noteworthy that the flea indices of the earlier survey were in the range 0·24–0·68, considerably lower than at present. It is proposed to extend these studies from the plague-free area of Morogoro to the chronic plague focus of Singida.

### 13.6. Anti-mosquito Measures

The control of malaria in the larger settled areas of Tanganyika has continued to depend on measures directed towards the reduction of larval stages of mosquitoes, particularly the main vectors *Anopheles gambiae* and *funestus*. These measures, which are summarized in the paragraphs that follow, include drainage and larviciding, and are also effective against the principal nuisance mosquito, *Culex fatigans*, control of which is regarded as an essential amenity in townships. The mosquitoes are, of course, also the vectors of Bancroftian filariasis and of some virus diseases.

### 13.6.1. *Anopheline larvicidal measures*

Anti-anopheline measures carried out in towns, settlements and institutions continued to be based on the use of a high-spreading malariol, the product now being used containing D.D.T. instead of the former mixture of D.D.T. and B.H.C., applied to water surfaces by means of standard sprayers of knapsack pressure pattern or, in some instances, by hand sprayers or mixed with sand, sawdust or rice husks. In situations where oil larvicides might be damaging to rice or fish farming, a powder larvicide containing B.H.C. has been applied by means of a rotary blower.

The larviciding programme in force in Tanganyika during 1962 covered the following settlements:

| | |
|---|---|
| Eastern Region ... ... | Dar es Salaam, Ukonga, Colito Barracks, Kisarawe, Kilosa, Bagamoyo, Morogoro, Kimamba, Mahenge, Utete, Ngerengere, Kingolwira and Wami Prison Farms. |
| Tanga Region ... ... | Tanga, Pangani, Handeni, Muheza, Mombo, Mnyusi, Pongwe, Amani, Mlingano. |
| Central Region ... ... | Dodoma, Mpwapwa, Kongwa, Singida, Kondoa, Itigi, Manyoni. |
| Southern Region ... ... | Mtwara, Lindi, Kilwa, Mikindani, Masasi, Tunduru, Nachingwea, Songea. |
| Southern Highlands Region | Mbeya, Mbeya Airport, Iringa, Tukuyu, Chunya, Kyela, Malangali. |
| Northern Region ... ... | Arusha, Tengeru, Moshi, Mbulu, Babati. |
| Western Region ... ... | Tabora, Nzega, Kahama, Kasulu, Kigoma, Ujiji, Urambo, Tabora Airport, Bukene. |
| Lake Region ... ... | Mwanza, Bwiru and Butimba, Shinyanga, Musoma, Maswa, Ngudu, Geita, Tarime, Nansio, Ukiriguru, Missungwe. |
| West Lake Region ... ... | Bukoba. |

### 13.6.2. *Drainage Measures*

Drainage and permanent works for the reduction of mosquito breeding were maintained in the larger settlements and isolated institutions throughout Tanganyika. Additional surveys or works were carried out in seven townships, but maintenance of earth drains was greatly complicated on account of the severe floods early in the year, while the rise in the level of Lake Victoria caused much damage to the lakeshore walls and drainage systems of Mwanza and Musoma, nor can these be properly reconstituted until the level of the lake stabilizes.

### 13.6.3. *Anopheline imagocidal measures*

Residual spraying has been restricted to such institutions as prisons, hospitals and schools, for purposes of general pest as well as mosquito control. Some suburbs of Dar es Salaam continued to receive house spraying with D.D.T., B.H.C. or dieldrin, but the great increase in the culicine nuisance frequently associated with such spraying made it necessary for the City Council to request the advice of the Malaria Service, and a survey of the situation in Temeke, Magomeni, Buguruni and Kinondoni was accordingly made towards the end of the year.

### 13.6.4. *Culicine control measures*

The problem pf controlling *Culex fatigans* in urban areas has continued to be the subject of investigation throughout the year. Tests of culicine larvicides have previously shown that diazinon 60EC is the most economic formulation available; also resistance to this product has not yet been encountered, whereas culicines become resistant to other insecticides with notorious rapidity. For the best results it has been found that the diazinon emulsion should be sprayed on water surfaces; flushing through drainage systems and pouring on of measured doses tends to reduce the efficacy. Since the introduction of diazinon early in 1962, there have been noticeable improvements in the control of culicine mosquitoes at Tanga and Iringa, but it is clear that the most important source of culicine breeding is the badly maintained sanitary appliance, particularly defective soakage pits.

### 13.6.5. *Investigations of insecticides and equipment*

Insecticides have been tested primarily for their knock-down activity, various samples having been submitted by Government Stores for this purpose. The knock-down action against *Culex fatigans,* selected because of the ease of colonisation of this mosquito in the laboratory as well as its ability to withstand insecticidal treatment, was assessed in a specially constructed test hut. The insecticide was applied through the standard hand sprayer at a rate of 70 full strokes per 1,000 cubic feet of space. The efficient samples proved as useful as the standard 0·1 per cent solution of pyrethrins in kerosene used in routine spray catches, while those that provided a knock-down of less than 75 per cent *C. fatigans* in ten minutes under standard conditions of testing were reported as being inadequate.

Equipment has been tested under field conditions, particular attention being paid to sprayers for larviciding, residual spraying and space spraying.

## 13.7. ANTI-MALARIA MEASURES

The control or attempted eradication of malaria by means of community-wide administration of anti-malarial drugs has continued to be investigated during 1962. These investigations have taken the form of direct administration to the people of various chemotherapeutic agents, usually in tablet form, or administration of the drug indirectly in the form of medicated salt.

### 13.7.1. *Screening trials of anti-malarial drugs*

As in previous years, in 1962 screening trials among partially immune children of various new drugs were performed by the Specialist Malariologist. Particular attention was paid to the chloroquine compounds that are tasteless, chloroquine naphthoate, tannate and silicate, and their potency was evaluated following administration in single doses and in divided daily doses simulating use in medicated salt. The naphthoate, tested previously in single large doses and found to be lacking in absorbability among many people with low gastric acidity, proved to be satisfactory in clearing parasitaemia when given in small daily doses of 30 mg. The tannate was somewhat less satisfactory, while results of the silicate trials were not yet available at the end of the year. It was concluded that these compounds may well have a place in medicated salt campaigns where sufficiently high doses of chloroquine phosphate or sulphate cannot be given because of the objectionable taste.

### 13.7.2. *Medical salt trial at Mto wa Mbu, Northern Region*

At the end of last year the first supplies of chloroquinized salt were distributed to the four retail shops at the settlement of Mto wa Mbu, medication of these supplies being greatly facilitated by the fact that a single wholesale dealer, situated at Arusha, controls the trade. At intervals of three or four months bags of common salt have been mixed with chloroquine diphosphate to give 0·3 per cent concentration of the active base ingredient; the bags are then stored with the wholesale merchant who dispatches them as required to Mto wa Mbu where the medicated salt is sold over the counter at the usual price. On the initial assumption that each adult inhabitant of the settlement took about ten grams of common salt in his diet daily (it has subsequently become apparent that the intake is less, possibly seven grams), the treatment ensured that he would receive approximately 30 mg. base chloroquine daily the cumulative dose being considerablygreater than that shown to be an effective suppressant of malaria in Tanganyika. With the assistance of a grant from the Division of Malaria Eradication of the World Health Organization, a commercial preparation of chloroquine diphosphate coated with the anti-leaching agent cetyl-stearyl alcohol has been purchased for the trial which is being performed with the assistance of the local medical staff.

Technical assessments have been carried out at quarterly intervals in this settlement where malaria was holoendemic before treatment commenced. At intervals of 3 and 6 months following the commencement of supply of medicated salt, the sprozoite rates in the vector mosquitoes *Anopheles gambiae* and *funestus* have been 0·0. The malaria parasite rates among the 3,000 human inhabitants of Mto wa Mbu have been as follows:

| *Human age grups* | *Pre-treatment parasite rates* | *Rates after 3 months use of medicated salt* | *Rates after 6 months use of medicated salt* |
|---|---|---|---|
| 0–11 months | 64·7 | 22·7 | 19·0 |
| 12–24 months | 68·9 | 7·1 | 18·5 |
| 3– 5 years | 76·9 | 0·0 | 2·1 |
| 6–10 years | 71·7 | 4·5 | 3·3 |
| 11–15 years | 65·5 | 3·7 | 8·2 |
| 16 and older | 24·7 | 7·1 | 2·0 |

It has been apparent throughout this trial, which continues, that the method is extremely popular among the inhabitants of Mto wa Mbu, where attempts to control malaria in the past by attack on the mosquito or on the parasite have failed. This popularity, coupled with the simplicity of organization and execution of the work, is unprecedented in this field of preventive medicine in Tanganyika; provided the infant parasite rates fall by attrition (nursing infants and very small children do not receive salt in their diet) it seems possible that eradication may be achieved.

## 13.8. Bilharzia

Studies of the snail vectors of bilharzia were continued by the Entomologists based at Mwanza and Morogoro. The Entomologist at Mwanza, in association with the Bilharzia Team of the East African Institute for Medical Research and workers of the Ross Institute of Tropical Hygiene, carried out investigations into the ecology of snails and into methods for their control by the use of molluscicides. His work, much of which is being published in the scientific literature, may be summarized as follows.

### 13.8.1. *Seasonal fluctuations of snails in a riverine habit*

At Mwanza in the Mironga River, the study was concluded of the seasonal fluctuations in numbers of *Biomphalaria sudanica tanganyicensis* and of the associated *Schistosoma mansoni* infection rate. Considerable fluctuation in the number of snails with cercarial infections was observed and, even during some periods when the water level was high and the stream in flood, large numbers of infected snails were found. Significant was the apparent ability of the snail to withstand flood conditions, and the rapidity with which snail population density was restored after repeated reduction by floods. Re-population of the lower reaches of the stream was probably greatly assisted by snails present in the upper catchment area, some being recovered from damp mud at depths of 6 to 8 inches in a water course which had been dry for twelve weeks. The ability of the species to withstand dessication is important, since the majority of streams in the area are of seasonal duration only. It is considered that the data available from this nineteen months' study will form a useful basis for planning control by chemical treatment of the river, in co-operation with the local health authorities.

### 13.8.2. *Techniques for marking snails with Cobalt 60*

Both laboratory and field studies frequently call for some method of identifying animals by marking them. The use of Cobalt 60 for this purpose has been reported in previous years. Estimations were made of the biological half-life of Cobalt 60 in the snail and the effects on the snail of a body burden of Cobalt 60 adequate for field studies over a prolonged period. In this investigation one hundred *Bulinus* (*Physopsis*) *nasutus productus* measuring 8–10 mm. from base to apex, were immersed for a period of 24 hours in one litre of water containing 5mC of Cobaltous chloride, and then maintained in an outside pool simulating their natural habitat. Each snail was assayed for radio-activity at intervals of six weeks over a period of six months, and observations were made on their breeding capacity and growth-rates. After the initial period of six weeks a considerable loss of radio-activity was found to have occurred. Thereafter, the measurements showed that radio-activity was decaying in an exponential manner with a half-life of approximately eleven weeks. Although there was a considerable range in the radio-active level of individual snails, at the end of the observations all specimens were easily detectable with the radiation monitor. Appreciable mortality of snails may have resulted from the effects of radio-active material during the first six weeks of the observations, but thereafter the group became stable, with a normal growth and unimpaired breeding capacity.

### 13.8.3. *Trials of molluscicides*

Laboratory trials were carried out to investigate the residual effects of two pesticides which have molluscicidal properties, Sevin (1-naphthyl-N-methylcarbamate) and Zectran (4-dimethylamino-3, 5-xylyl-methylcarbamate). A ten per cent granular formulation of Sevin and a 25 per cent wettable powder formulation of Zectran were mixed in various proportions with sand in bowls set up as aquaria, and *Biomphalaria sudanica tanganyicensis* introduced at regular intervals up to 113 days and their mortality recorded. Sevin, mixed at 1 to 80, killed 90 per cent of introduced snails 96 days after the mixture had been standing in the aquarium, and a concentration of 1 to 40 killed all snails after 73 days; but it was found that the weaker the concentration of Sevin the longer its duration of activity. Zectran at 1 to 90 killed all snails introduced after 113 days. But for the high toxicity of the latter pesticide under natural conditions in East Africa, it might be employed selectively as a molluscicide.

13.9. Surveys of the incidence of bilharzia and its vectors were also undertaken by the second Entomologist working from Morogoro. The Kilombero Sugar Company Estate, where overhead irrigation is in use but surface drainage also necessary, was visited twice during the year, the work being organized in close co-operation with survey staff of the East African Institute for Medical Research. On the first visit no vectors were found, but five months later, in August, small numbers of *Bulinus* (*Physopsis*) *nasutus* were taken from the drainage channels and from a canal supplying water to a village on the north-west boundary of the estate. Other snails found were *Bulinus forskalii*, and species of *Lanistes*, *Pila* and *Anisus*, as well as *Lymnaea natalensis*. The presence of the vector suggests that *Schistosoma haematobium* may become an important health problem in this area where it has hitherto been scarce.

### 13.10. INTERNATIONAL AND PORT HEALTH

Anopheline and culicine control measures were continued at Ukonga Airport, Dar es Salaam, and at Tabora Airport under the direction of the Malaria Service. During the year these measures were re-organized and improved following a survey of the airport at Mbeya. The measures at Ukonga are somewhat more extensive than at other airports owing to the greater international importance of the airport. These measures include:

(a) Larviciding with anti-malarial oil containing D.D.T. or dusting with B.H.C. powder larvicide particularly in the rice fields between the airport and prison, at weekly intervals;

(b) Maintenance of the extensive drainage system throughout the airport and settled area;

(c) Residual spraying of all non-proofed buildings in the area, using B.H.C. at quarterly intervals; and

(d) Domestic culicine control directed against the principal nuisance mosquito, *Cules fatigans*, in peridomestic breeding sites, and *Aedes* control by elimination of breeding places in holes in trees.

### 13.11. RESEARCH

Research work carried out during 1962 was related to problems of malaria or mosquito control, or of the control of the snail vectors of bilharzia and the rodent and flea vectors of plague, met with in the field. Much of the work has been recorded elsewhere in this Report. The principal investigations may be summarized here.

#### 13.11.1. *Mosquitoes and malaria*

(1) Medicated salt trial at Mto wa Mbu, Northern Region.

The purpose of this trial is to determine the effect upon holoendemic malaria of a standard suppressive, chloroquine, administered in a special anti-leaching formulation mixed with ordinary cooking salt. Salt containing 0·3 per cent chloroquine base began to be sold to the 3,000 inhabitants of Mto wa Mbu through their normal commercial channels at the beginning of the year, and has continued in popular demand throughout 1962. Technical assessments made after 3 and 6 months' use of the medicated salt reveal a disappearance of sporozoites among the vector mosquitoes, and a great reduction in parasite rates among the people, particularly those aged more than 2 years. The trial continues into 1963.

(2) Screening trials of chloroquine compounds at Morogoro.

Single doses and divided daily doses of three tasteless chloroquine compounds, the naphthoate, tannate and silicate, have been administered to semi-immune children in the Morogoro area. Although the effect of single large doses of some of these compounds was not as good as that of standard bitter chloroquine preparations, small daily doses of 30 mg. proved satisfactory, it being concluded that there might be a place for these expensive research products in medicated salt work, where high dosage is needed but difficult to achieve at present because of objectionable taste.

(3) Trials of insecticides at Morogoro.

Trials of culicine larvicides and of pyrethrum insecticide formulations continued during 1962, using *Culex fatigans* as the test mosquito.

(4) Minor vectors of malaria at high altitudes, Morogoro area.

On the slopes of the Uluguru Mountains near Morogoro the survey continued of the vector status of *Anopheles demeilloni*. Although precipitin tests showed the blood meals of these scarce mosquitoes to be human in origin, so far no sporozoites have been found. The investigation continues into 1963.

### 13.11.2. *The vectors of plague in Tanganyika*

Study of the rodent and flea vectors of plague was re-opened in 1962, species identifications being made and flea indices determined in the town and environs of Morogoro. This is a continuation of work carried out by the Malaria Service in 1957/58 and will be extended to the plague focus near Singida next year.

### 13.11.3. *The snail vectors of bilharzia in Tanganyika*

Studies of the ecology and destruction of snail vectors of bilharzia continued in association with the Bilharzia Team of the East African Institute for Medical Research at Mwanza. During 1962 the ecology of the snails *Biomphalaria sudanica tanganyicensis* and *B. choanomphala* was related to climatic fluctuations, techniques were developed for marking snails with radio-active Cobalt 60, and trials of two pesticides, both methylcarbamates were completed.

## 13.12. Laboratory Services

13.12.1. In the Malaria Service laboratory at Morogoro the examination of blood slides and mosquitoes, collected during surveys and drug trials in various parts of the country, continued as in previous years. Examinations were also made of snail, rodent and ectoparasite specimens.

13.12.2. During 1962 the number of thick blood films examined was 2,603 from the following sources:

| | |
|---|---|
| Eastern Region drug trials ... ... ... ... ... | 385 |
| Dar es Salaam tuberculosis patients ... ... ... ... | 354 |
| Northern Region drug trials ... ... ... ... ... | 1,560 |
| Southern Highlands Region survey at Kyela ... ... ... | 304 |

13.12.3. On the entomological side, the following sporozoite rates were obtained upon dissection of vector anopheline mosquitoes in various parts of Tanganyika:

| *Eastern Region* | *A. gambiae* | *A. funestus* |
|---|---|---|
| Morogoro District: Konga ... ... ... | 5·3 | 0·0 |
| Tubuyu ... ... ... | 0·0 | 6·3 |
| Kibwe ... ... ... | – | 5·6 |
| *Southern Highlands Region* | | |
| Kyela ... ... ... | 3·5 | 4·0 |
| *Northern Region* | | |
| Mto wa Mbu following treatment: | | |
| (a) in March ... ... ... ... ... | 0·0 | 0·0 |
| (b) in July ... ... ... ... ... | 0·0 | 0·0 |

13.12.4. Blood slide and mosquito preparations were made for use in the various teaching courses organized by the Malaria Service, and in addition the following work was carried out during the year:

(a) Breeding of *Culex fatigans* in the insectary, larvae and adults of this mosquito being used in large numbers for trials of various insecticides.

(b) Survey of *Anopheles demeilloni* as a possible minor vector of malaria on the slopes of the Uluguru Mountains near Morogoro: although precipitin tests show the blood meals of the species to be human in origin, so far no sporozoites have been found.

# 14. THE DENTAL SERVICE

## 14.1. Dental Surgeons

During 1962 the establishment of dental surgeons was maintained at four—all being stationed in Dar es Salaam. An attempt was made to staff the hospital with two part-time surgeons, but this proved unsatisfactory and a dental officer resumed full-time duties in August. No working safaris have been possible during 1962.

## 14.2. Assistant Dental Officers

14.2.1. In July the first six Assistant Dental Officers successfully completed their promotion on trial course, and were posted to Mbeya, Tanga, Tabora, Mwanza, Iringa and Moshi. The Senior Dental Surgeon visited the units at Iringa, Mbeya and Tanga, and handed over these units previously staffed by Dental Surgeons, to Assistant Dental Officers.

14.2.2. The second course will be completed in January, 1963.

14.2.3. Equipment has been ordered for five new surgeries and is due in Dar es Salaam in January, 1963. This equipment will be installed at stations manned by Assistant Dental Officers.

### 14.3. Dental Technicians

14.3.1. A newly appointed Dental Technician arrived in May and began training four G.C.E. level students in dental mechanics. The course of training follows that laid down by the City and Guilds of London Institute and is recognized by the Institute. City and Guilds have agreed that the four students may sit the Intermediate Examination after one year instead of the normal two years. These students are due to sit the Final Examination in May, 1965, and if successful, become fully qualified Dental Technicians.

14.3.2. It is planned to admit for training four more students in May, 1963.

### 14.4. Private Practitioners

14.4.1. The dental treatment of government officials and their families residing in the Northern and Central Regions continued to be undertaken by private practitioners, based on Arusha and Dodoma. The private practitioner in Mwanza left for Canada in March.

## 15. THE SLEEPING SICKNESS SERVICE

15.1. The supervision of the Sleeping Sickness Service continued to be the responsibility of the Regional Medical Officer, Tabora, officer-in-charge of the region most heavily infected with this disease.

15.2. During the year there was a considerable fall in the number of new cases reported, a fall which at one time led to a suspicion that the cases were not being as well reported as formerly. This suspicion has not been substantiated and is in fact refuted by the maintenance of a death rate at approximately the same rate as in previous years; in fact the fatality rate continues to fall slightly as has been the tendency for several years.

Reported Incidence, 1958–1962

| | 1958 | 1959 | 1960 | 1961 | 1962 |
|---|---|---|---|---|---|
| New Cases | 555 | 827 | 825 | 765 | 355 |
| Deaths | 67 | 84 | 88 | 74 | 33 |
| Mortality per cent | 12·0 | 10·1 | 10·6 | 9·7 | 9·3 |

As usual the highest number of new cases was reported from the Western Region, 169. Next comes the West Lake Region, 64 and the Northern Region, 59. The incidence of the disease has fallen considerably in Kibondo, Biharamulo, Ngara, Karagwe and Nachingwea Districts, as compared with last year. A considerable fall in the incidence of the disease observed during the last two years in the Ngara District is attributed to the intensive spraying of the bush by the Tsetse Organization. Difficulties have been experienced in controlling existing settlements and people moving in and out of the infested bush collecting honey and hunting in pursuit of food.

15.3. In the *Western Region*, Kasulu District gave the highest number of new cases in the country, although this year the number is considerably lower than that of 1961. As usual, most of the cases came from the north and north-western part of the district. During the year bush clearing was continued in many places and control of people settling in unsurveyed areas was exercised. A check on people travelling in infested forest has been maintained by the use of safari chits. On returning from their journey such travellers are required to report to the nearest dispensary for a blood slide examination.

15.4. A tsetse survey team was sent from Tabora to carry out a tsetse survey of potential agricultural land in Luiche Valley. It was found that the density of fly was low and no sleeping sickness was found. It was therefore recommended that no organized clearing would be carried out with district council funds, but that the bush would be cleared as needed to extend cultivation.

15.5. In Kibondo District the incidence of the disease, after having reached a peak of 91 cases in 1962, fell to 32 cases during the year. About 60 per cent of these are honey collectors. From Kahama District only six cases were reported and from Tabora District 24 cases, the majority of whom came from along the Igombe River. Similarly, in Kigoma District the incidence of the disease is falling and only 13 cases were reported, one of which was a case of *T. gambiense* infected in the Congo. Lake shore spraying was carried out at several points.

15.6. In Mpanda District a much reduced number of cases, namely 38, was reported, and Nzega District has been free of the disease for three consecutive years. Also no cases were reported from Ufipa.

15.7. The picture was very similar in *West Lake Region;* during the year a total of 64 cases was reported, approximately a third of the number in 1961.

15.8. In the *Northern Region* the only significant rise in the incidence of the disease was reported. Mbulu District, which is responsible for this rise, reported 55 cases as opposed to 49 in 1961, 20 in 1960. The incidence is now slightly higher than it was in 1959 in this district.

15.9. There is nothing of particular interest to report from the other regions.

## 16. THE PSYCHIATRIC SERVICES

### 16.1. Mirembe Hospital

16.1.1. The number of patients remaining in hospital on 30th November, 1962, was 744. This is a decrease of 43 over the number remaining in hospital at the end of 1961.

16.1.2. The number of admissions this year were 567, a decrease of 49 over last year. Those admitted under certificate showed a decrease of 91, those admitted voluntarily a decrease of one, and those under observation an increase of 43.

16.1.3. The number of discharges, 500, is greater than last year by 43. During the months of April to August some patients were discharged before they were considered fully fit owing to gross overcrowding in the hospital. During the year one patient was transferred to Isanga Institution, four to Lutindi Mental Hospital and 35 to the new Irente Farm, Lushoto.

16.1.4. The number of deaths this year was 61 as compared with 47 last year. However, 18 of the 61 were due to old age, and approximately 25 per cent of the remainder were admitted in an extremely feeble state of health. The number of deaths of those in hospital is just below 8 per cent, a figure which still compares favourably with mental hospitals of a similar size elsewhere.

16.1.5. The general health of the long-term patients throughout the year has been very good.

16.1.6. Once again electro-convulsive therapy, the tranquillising drugs and therapeutic occupation, have played the major role in treatment.

16.1.7. The new ECT machine has been extensively used, about 40 patients receiving treatment on alternate days. This machine, the cheapest of its kind, was bought from England in August, 1962, and in spite of the very heavy demands made on it, has given not a moment's trouble. The use of the above combination, more intensive than in past years, has noticeably decreased the incidence of maniacal outbursts, destructive and aggressive behaviour and shortens the time of hospitalization.

16.1.8. Some psychoses have responded very well to Stelazine, which is being used more frequently, and anti-depressants and relaxants such as Tofranil and Librium are proving valuable in the treatment of the neuroses.

### 16.2. The Isanga Institution

16.2.1. At the end of 1962 there were 257 patients remaining in Isanga Institution, which is an increase of one over the number remaining at the end of 1961. There were 85 admissions; the number of observation cases from prisons was much the same as the previous year. There was a large fall in the percentage of Category "B" admissions, but a slight increase in the Category "C" admissions. No Category "A" patients as such were admitted during the year.

16.2.2. During 1962, 72 patients were discharged compared with 69 in 1961. Seventeen patients were transferred to Mirembe compared with 4 in 1961. The number of patients returned to prison and those conditionally discharged were the same as last year. There was, however, a large increase in the number of patients released unconditionally and the number of *nolle prosequi* cases increased by 13.

16.2.3. Librium was tried for the first time on epileptic patients, but apart from one very good result the effect was disappointing. Anti-malarial prophylaxis was introduced on 9th April, 1962, following recommendations from the 28th Advisory Board of 5th March, 1962.

16.2.4. Sisal mat and basket-making increased and more male and female patients were employed in this work than previously.

16.2.5. The garden begun by female patients and staff in 1961 has proved invaluable, both in stimulating interest and improving diet as hundreds of pounds (weight) of pumpkin, tomatoes, onions, cabbage and kale were supplied to the kitchen. Fighting amongst the female patients, destruction of linen and equipment and seclusion of patients are now virtually of the past and have not occurred since the end of 1961.

16.2.6. The number of male patients engaged in occupational therapy in the gardens has greatly diminished. This is due to the fact that more staff is required to remain in the compound supervising patients for security reasons, and fewer patients than previously can go out to work outside the compound, again for security reasons.

### 16.3. The Psychiatric Unit, Dar es Salaam

16.3.1. The present building housing psychiatric cases in Dar es Salaam is badly designed and altogether unsuitable for the purpose for which it is used. It is now being replaced by a modern psychiatric hospital which it is hoped will be ready for occupation towards the end of 1963.

16.3.2. During 1962 the vast majority of the cases sent for observation in the ward comprised patients suffering from acute mental disturbance, brought on by toxic, nutritional or social factors. Many were rendered sufficiently well for discharge using simple methods within 14 days, which is within the normal "holding" period. Others, of course, required longer. Since admissions have averaged 19 a month, it can be seen that the ten beds available in this psychiatric block have been fully occupied most of the time and that there has been an unavoidable overcrowding on several occasions.

16.3.3. Schizophrenia, relatively more common amongst Asian patients, is the most common psychotic condition met with, but it is closely followed by mania. Depression, epileptic mental deterioration and imbecility are less common. Organic mental disease tends to find its way more directly into the general wards of the hospital—as it should.

16.3.4. In ordinary clinical practice in Dar es Salaam, reports the Consultant Physician, psychoneuroses and psychosomatic disorders are very common. He anticipates that the new building will be able to provide for these cases, both as in-patients and out-patients without incurring the stigma and discomfort which characterises the present accommodation.

## 17. THE PATHOLOGY LABORATORY SERVICE

17.1. A full report on this Service is published separately; however, the main points from it are given below.

17.2. The work of the Laboratory Service continued under a slightly increased pressure compared with previous years, but there were notable changes of policy in regard to higher training and advancement of the technical staff.

17.3. For many years the laboratory has been training Laboratory Assistant students up to what was considered to be the A.I.M.L.T. Intermediate level. With the introduction of government bursaries for higher training, theoretical standards were put to the test and found to be correct. Of five serving Laboratory Assistants sent to the United Kingdom for higher training, four immediately passed their intermediate. The one who failed passed both Intermediate and Final within the following twelve months.

17.4. Laboratory Assistant students, however, have normally been selected from Standard X boys leaving school. Serving Laboratory Assistants who manage to gain their General Certificate of Education in their spare time become eligible for higher A.I.M.L.T. Training.

17.5. Within the framework of higher training, for the younger serving staff reinforced by the ability, experience and seniority of a number of technicians with longer service, a rapid and complete Africanisation of the technical staff presented no problem. Credit, however, for the ease and success of this operation must go to the retiring expatriate Technologists who helped to build the technical establishment up to present level.

17.6. In order to increase efficiency and reduce duplication of trained staff the Transfusion Serology Unit was centralized at the main hospital laboratory, as also was the main Haematology Unit.

17.7. During the year special investigations, including a Pathologist's report, numbered 4,505. Of these 2,944 were from government hospitals, 1,362 from voluntary agency hospitals and 199 from private practitioners. It should be noted that voluntary agency hospital demands on the government Laboratory Service have shown a very marked increase in recent years.

17.8. In reviewing the various branches of clinical pathology in Dar es Salaam,—parasitology, general bacteriology, mycobacterial bacteriology, virology, general serology, serological tests for syphilis, blood bank and British Red Cross Donor organization, transfusion and pregnancy serology, haematology, clinical pathology, special cytology and histopathology, there was a general increase in the work done in all branches and particularly in histopathology.

17.9. During the year surgical biopsies from 3,226 cases were examined, 333 more than in 1961. African case biopsies accounted for 2,847 and non-African 378. From the record of the African biopsies, malignant and locally malignant tumours number 783 and when analysed gave the same distributional picture of malignancy as in previous years. With regard to malignant neoplasms in children, during the three year period 1960–1962 there were 166 including 104 lymphomas. Of these 85 were histologically lymphosarcomas (so called Burkitt's lymphoma syndrome), 10 were Hodgkins and 9 reticulosarcomas.

17.10. The only branch of clinical pathology in which no progress was made was that of clinical post-mortems. A dramatic improvement in the position, it is hoped, will follow new legislation to be enacted early in 1963.

17.11. Public health and epidemiological investigations represent an important branch of the work of the Central Laboratory and include the bacteriological control of water samples, bacteriological sampling of canned foods for sterility and bacteriological control of food handlers.

17.12. The nine regional laboratories continued their important function of supplying a technology service for the main regional hospitals. Between them they investigated more than a quarter of a million specimens.

17.13. Issues of viable and labile vaccines and sera from the Central Laboratory amounted to 2,434,000 doses of vaccine lymph, 15,240 doses of yellow fever vaccine, 20,200 doses of Salk type polio vaccine and 278 courses of rabies vaccine.

## 18. THE LEPROSY SERVICE

### 18.1. General

18.1.1. There have been several notable developments during the year. The Radda Barnen organization has commenced operations in the West Lake Region and, utilizing existing dispensary services, is providing an extensive out-patient service with hospital facilities in Bukoba.

18.1.2. In the Southern Region the BELRA officer supervising out-patient clinics has extended his sphere of influence into Lindi District, while in the Eastern Region leprosy treatment has been made available at local authority dispensaries in the Kisarawe and Mzizima Districts. In this area, owing to the proximity of Dar es Salaam, the social complications of leprosy are of particular importance and begging in the streets of the capital presents a very difficult problem, to which the provision of treatment on as wide a scale as possible in the surrounding countryside may well be the long term solution.

18.1.3. In the Lake Region plans have been formulated for additional subsidies by local authorities to the voluntary agency leprosaria and for the provision of out-patient facilities at local authority dispensaries supervised in each district by a specially trained rural medical aid, whose duties will include that of liaison with the local voluntary agency leprosarium. Such an organization is an attempt to overcome the greatest difficulty facing the leprosy control campaigns in this country—that of a lack of co-ordination between the leprosaria and the out-patient services. Ideally, such a co-ordination should be achieved by a full-time Regional Leprologist, but until such time as more funds and more doctors are available, subordinate medical personnel with special training working under the general direction of the Regional Medical Officer can, it is believed, at least make a start towards this end.

### 18.2. Therapeutics

18.2.1. Dapsone, either as tablets or as depot injections continues to be the drug of choice for out-patient mass treatment. Experience indicates that there is a high margin of safety and untoward reactions due to the drug occur in not more than five per thousand cases treated.

18.2.2. The second drug of choice is 50 per cent aqueous solapsone given by injection, used on a large scale in most leprosaria for acute cases of all types. The dosage, again, is conservative, the maximum being usually only 1 cc. twice weekly. Thiambutosine is being used increasingly for severe cases intolerant of any form of sulphone therapy.

18.2.3. Ditophal (Etisul—I.C.I.) is under trial at a number of centres. Results appear to be less dramatic than those reported from West Africa.

18.2.4. A quantity of new long-acting sulphonamide, Ro. 4393, has kindly been made available for trial at Chazi leprosarium by Messrs. Roche.

18.2.5. The orthopaedic correction of palsies and deformities is still on a small scale only. Provided that mass treatment can be carried out both extensively and intelligently, the number of cases requiring such treatment can, it is confidently believed, be limited to reasonable proportions.

### 18.3. Chazi Leprosarium

18.3.1. At the government leprosarium at Chazi the delay in forming a Board of Management to replace the old Chazi Welfare Committee has posed many problems for the senior staff. It is hoped that this Board of Management will be formed in the very near future.

18.3.2. General policy has remained directed towards efforts to raise the standard of living of the patients by providing improved housing and the opportunity to earn a little income for work on the farm.

18.3.3. The initial failure of crops due to flooding left many patients short of food and all financial resources were extended in providing assistance to needy cases. The Leprologist reports that the majority of patients coming to Chazi were still self-reporting and, in spite of regular visits to the local authority dispensaries in the hyper-endemic Uluguru area, only a few patients from these parts were willing to come in when so advised by rural health staff, unless other members of their families were already resident there. Referred cases admitted are mostly from Dar es Salaam, the Pare and Handeni Districts and the Northern Region.

18.3.4. Clinical trials of the more recent anti-leprotic drugs continued. Of particular interest is the effective use of Thiambutosine (D.P.T.—Ciba 1906) in cases of progressive lepra reaction and of repeated attacks of neuritis in lepromatous leprosy. This drug is expensive but its use in cases of these complications which failed to respond to sulphone therapy in any form was justified by the results. The generosity of Messrs. Ciba in providing a supply of Ciba 1906 gratis after a burglary of the drug store is gratefully acknowledged. Thanks are also due to Messrs. Roche for a supply of Ro. 4393 for trial purposes, mentioned above, and to the East African Leprosy Research Centre and the Central Medical Laboratory, Dar es Salaam, for histopathological investigations.

### 18.4. Makete Leprosarium

18.4.1. It was not possible to provide a resident full time medical officer at this leprosarium, but the resident nursing sister, ably assisted by an experienced group of nursing orderlies, carried on the services remarkably well. The institution remained under the direction of a visiting medical officer from Tukuyu.

### 18.5. Publications

18.5.1. The following papers by the Leprologist were in preparation or were printed during the year:

An unusual case of Acne Keloid (*Leprosy Review:* October, 1962, 33–63).

Acute Oedema in Leprosy (*Internatioual Journal of Leprosy:* in press).

### 18.6. Leprosy Control

The Ministry's Leprologist reports as follows:

#### 18.6.1. *General Considerations*

The epidemiology of leprosy is governed by the existence of infective (i.e. bacteriologically positive) cases with opportunity for contact with individuals susceptible to infection, a combination of circumstances which results in great variations in leprosy prevalence in different communities and different areas. Factors favouring the spread of leprosy are:

(a) a relatively high population density living in over-crowded conditions with a low standard of hygiene;

(b) ignorance of the early manifestations of leprosy (e.g. its confusion with skin allergies and fungus infection) both on the part of the public and on the part of the local medical practitioner; and

(c) movement of population, leading to an increase in either the number of infective cases or the number of susceptibles or both.

The control of leprosy has accordingly been tackled by a concentrated effort directed at the second of these three factors, in particular the training of local health personnel and the provision of special treatment on as wide a scale as possible.

18.6.2. In the Eastern Region training courses for rural medical aids and tribal dressers were held and the availability of leprosy treatment extended in Kilosa, Kisarawe and Mzizima Districts. Adverse weather and road conditions limited the numbers attending the course in Kilosa District in January. The course for the staff of Kisarawe and Mzizima Districts was held in the Medical Training Centre in April.

18.6.3. The most important hyperendemic focus of leprosy, the Uluguru Chiefdom of Morogoro District, was visited in July. Arrangements are now under consideration for the employment of one rural medical aid on full-time leprosy duties in this area, a measure which is long overdue in view of the numbers involved (e.g. 1,200 under treatment within a radius of 20 miles of Matombo).

18.6.4. In Kisarawe and Mzizima Districts a visit to several dispensaries in August was made for the dual purpose of assessing the public response to treatment and of giving further clinical training to the rural medical aids. In this area, the social complications of leprosy are of particular importance. It is hoped that with the growth of public confidence in both the treatment and the propaganda dispensed by the rural medical aids, these social complications will be controlled.

18.6.5. In Bagamoyo, leprosy appears to be less prevalent than elsewhere, while the extension of treatment in Utete and Mahenge must await the development of primary facilities.

18.6.6. In the Southern Highlands Region the leprosy clinics in Rungwe District based on Makete Leprosarium have continued to function efficiently despite the fact that there has been no full-time medical officer at the Leprosarium. The local authority, in common with so many in the country, faced a serious financial crisis during the year and consideration had to be given to the closure of these clinics. Fortunately, wiser counsel prevailed and the necessary funds were made available. The situation in this area is that, after a five years' concentrated campaign, the numbers clinically cured exceed those reporting with leprosy *de novo* and a steady decline in leprosy prevalence can now be confidently expected. The next step is the introduction of a similar scheme in another area of high prevalence—possibly in Njombe or Chunya.

## 19. THE TUBERCULOSIS SERVICE

### 19.1. General

19.1.1. The Tuberculosis Service in Tanganyika is organized on a regional basis, but unfortunately it has not yet been found possible to provide such a service in every region. Regions still without a fully organized tuberculosis service are Western, Eastern (apart from Dar es Salaam and its environs), Southern Highlands, Lake and West Lake. This is not to say that there is no medical care whatsoever for patients suffering from tuberculosis in any of these regions. Such care is provided, but on an *ad hoc* basis, by individual hospitals, without any organized and co-ordinated regional scheme.

19.1.2. In Lake and West Lake Regions, a great deal of tuberculosis work is being done both by government and voluntary agency hospitals. A plan for the co-ordination of this work has been prepared, and it is expected that during 1963 this plan will be implemented with the help of a charitable organization "Misereor" which derives much of its funds from West Germany. In the meantime, although there is no organized scheme, a number of hospitals do not confine their work merely to the treatment of in-patients, but also provide a follow-up service for out-patients to ensure that they complete a course of treatment satisfactorily.

19.1.3. In the Southern Highlands Region, the Southern Baptist Mission Hospital at Mbeya continued to function at full capacity throughout the year. In Njombe District a Roman Catholic mission hospital at Lugarawa opened 51 tuberculosis beds during the year and wish to increase this number to 60. In addition there are a few tuberculosis beds in most government and voluntary agency hospitals in the region. A scheme for the co-ordination of the hospital services and for the provision of a satisfactory follow-up service for patients discharged from hospital to continue their treatment as out-patients, which does not exist at present, is in course of preparation.

19.1.4. In the Eastern Region there is a control scheme for Dar es Salaam and its environs, but the rest of the region is not as yet covered by an organized scheme, although a number of tuberculosis patients receive treatment at Morogoro and at other hospitals in the region. Extensions to the Capuchin hospital at Ifakara will provide 100 tuberculosis beds.

19.1.5. The Western Region is the most backward of all as far as provision of tuberculosis services is concerned, and indeed opinion is divided as to whether or not tuberculosis is a major problem in this large and relatively sparsely populated area. It is certain that the number of patients complaining of tuberculosis admitted to hospitals in this region is lower than in other regions, but determination of the actual incidence of disease in the area must await an organized investigation. In the meantime it would appear reasonable to give this region a relatively low priority in the organization of tuberculosis services as compared with other regions where the incidence of the disease is already known to be high.

### 19.2. Dar es Salaam

19.2.1. Until August the tuberculosis service in Dar es Salaam was under the charge of the Consultant Physicians and their Registrars, but thereafter it was taken over by a full-time Tuberculosis Officer. The most noticeable result of this change, with its concomitant closer medical supervision of the service, was a remarkable increase in attendances by out-patients; the number of attendances made by tuberculosis out-patients rose from 3,839 in the last quarter of 1961 to 19,351 in the last quarter of 1962.

19.2.2. The tuberculosis service in Dar es Salaam is based on the tuberculosis beds in the general hospital. These beds were originally contained in the Sewa Haji block, but consequent upon the reorganization of the hospital and the conversion of the Ocean Road Hospital to a maternity hospital, the infectious disease beds were transferred to Mwaisela block. One result of this was a small decrease in the number of beds available for treatment of tuberculosis, but this decrease was more than compensated for by a more rapid turn-over of patients, and admissions during 1962 numbered 751 compared with 591 during 1961; the corresponding figures for discharges were 684 and 429. It is pleasing to note that in spite of the increased numbers of patients being treated, the number of deaths fell from 44 in 1961 to 33 in 1962. The total number of new cases diagnosed in 1962 was 725, and 5,580 sputum examinations were carried out of which 537 or approximately 10 per cent were found to be positive for tubercle bacilli. Total attendances by tuberculosis out-patients numbered 61,949.

19.2.3. The special circumstances of Dar es Salaam, with a large proportion of the out-patients living within comparatively short distances of the hospital, made it possible to introduce daily streptomycin injections as one factor in the treatment of out-patients. It was considered advisable to do this as investigations had shown that there was a very high incidence of primary drug resistance in Dar es Salaam. Although a majority of out-patients are resident in Dar es Salaam or its immediate vicinity, that is not to say that they are in fact residents of the area. Undoubtedly the treatment facilities available in Dar es Salaam act as a magnet to patients from a considerable area around the City and there is undoubtedly a real danger of an increase in the pool of infection being caused by such patients migrating to Dar es Salaam and living with friends and relatives under unsatisfactory, over-crowded conditions while they seek treatment. This position can only be improved by an extension of the scheme into the surrounding areas, with out-patient treatment being made available at the smaller local authority dispensaries. This extension is being planned.

### 19.3. Southern Region

19.3.1. The tuberculosis service in the Southern Region is under the control of a full-time Tuberculosis Officer based on Nachingwea hospital, where the majority of the beds are ear-marked for the treatment of this disease. The service is planned on a basis of full co-operation between government and voluntary agency hospitals and local authority dispensaries, and on the whole this co-operation was reasonably effective throughout the year although there were lapses in certain areas at certain times. The basis of the scheme here, as elsewhere, is that the patient is first admitted to hospital for a period of two to three months and is then discharged to continue his treatment as an out-patient, based on the dispensary nearest to his home. Arrangements are made for him to attend the nearest hospital at quarterly intervals for X-ray. A total of 330 beds was available for the treatment of tuberculosis patients in the region, although this number was in fact often exceeded. The total number of out-patient treatment centres was increased during the year from 71 to 97.

19.3.2. During 1962 a total of 905 new cases of tuberculosis were notified, while a total of 713 cases were notified as discharged cured; 229 patients completed their course of chemotherapy, 142 patients defaulted in the course of treatment, 80 patients died, and it was necessary to re-admit to hospital for one reason or another 88 patients who had been discharged to out-patient treatment. It should be noted that all these figures may be slightly on the low side as the Tuberculosis Officer reports that not all treatment centres had presented their returns at the time when he was consolidating his figures.

19.3.3. A particular problem in a region as extensive as the Southern is to make arrangements for patients to attend regularly for follow-up X-ray. Local authorities are encouraged to provide transport and it is very satisfactory to be able to note that the Newala and Masasi District Councils have made very effective arrangements for this purpose. Unfortunately other district councils have not been as concerned about the welfare of their constituents and transport arrangements have been inadequate or totally lacking. In such cases, hospital transport has been used in an emergency, but obviously this cannot play any major part in solving the problem.

19.3.4. A B.C.G. vaccination campaign was initiated during the year in the eastern half of the Southern Region. This was made possible by the provision of funds by local councils and also by a gift of a large batch of vaccine to Ndanda Mission hospital for use in Roman Catholic schools. A total of 12,000 school children were vaccinated in the area during 1962.

### 19.4. Central Region

19.4.1. The Central Region tuberculosis control scheme is based on Dodoma hospital, where there is a total of 84 tuberculosis beds. These beds were full to capacity throughout the year, and turn-over of patients was rapid. A total of 289 patients were admitted during the year and 231 were discharged, while 12 absconded and 22 died.

19.4.2. Although nominally a regional scheme, the fact that only one major hospital concerned with the treatment of tuberculosis was sited at Dodoma meant that in fact patients from Dodoma District received priority for treatment. In an effort to alleviate this the beds were divided towards the end of the year—18 being reserved for patients from Singida District, 10 for patients from Mpwapwa District, 10 for patients from Kondoa District and 4 for patients from Manyoni District. The remaining 42 beds continued to be reserved for patients from Dodoma District. It is obvious that the expansion of this scheme depends upon arrangements being made for all hospitals in the region, both voluntary agency and government, to co-operate in it. Plans are being made to this end.

### 19.5. Northern Region

19.5.1. The Northern Region tuberculosis scheme is based primarily on the large and long-established hospital at Kibongoto. This hospital also serves the Pare area of Tanga Region. There are supplementary tuberculosis beds for the western part of the region at Mbulu and Oldeani and to some extent the Mbulu District tuberculosis service operates on a self-contained basis although under the general supervision of the regional Tuberculosis Officer.

19.5.2. Kilimanjaro District, in which Kibongoto hospital is situated, has been the scene of an intensive campaign for the elimination of tuberculosis for some 35 years. It had been hoped that victory was in sight, particularly as admissions from this area during 1961 showed a decrease of one third compared with the 1960 figures. It is disturbing to note that 1962 figures have returned to the 1960 level, and that there has been in fact no effective diminution of the incidence of new cases. Nevertheless, response to treatment in terms of sputum conversion and radiological appearance continues to be almost 100 per cent satisfactory, and the relapse rate of patients discharged cured is gratifyingly low. In an endeavour to reduce the incidence of new cases the minimum period of observation of all cases under treatment has been extended from three to five years; artificial pneumo-thorax has been reintroduced as an added line of treatment for selected cases which it is considered present a danger of developing drug resistance; and chemoprophylaxis has been extended to all tuberculin positive reactors under the age of 15: such reactors are usually contacts of active cases. It is hoped that this intensified campaign will in time show results in a reduced incidence. In addition the B.C.G. vaccination campaign which has already covered all school children in this area is now being extended to children who do not attend school. A total of 24,304 school children were vaccinated during the year.

19.5.3. In Mbulu District, the two main hospitals concerned with diagnosis and supervision of treatment of the disease are the government hospital at Mbulu and the mission hospital at Ndareda. The hospital at Oldeani is used as supplementary bed accommodation under the control of the Medical Officer, Mbulu. Unfortunately the poor communications in this large district make it difficult for patients discharged to out-patients treatment to attend at one or other of the centres for their periodical X-ray examination. The only hope for improvement in the position lies in the local authority organizing a transport service for this purpose, but up to the present this has not been possible for financial reasons. Although there is an adequate network of local authority and voluntary agency dispensaries covering this district, it must be reported, with regret, that supervision and treatment of tuberculosis patients discharged to out-patient care is unsatisfactory.

### 19.6. TANGA REGION

19.6.1. The Tanga Region tuberculosis service is similar in outline to those already described. It covers the whole Tanga Region with the exception of the Pare area which, as already said, is covered by the Northern Region scheme. There is a total of 210 tuberculosis beds in the region situated in government hospitals at Tanga, Muheza, Korogwe, Handeni and Lushoto, and in the voluntary agency hospital at Bumbuli. All were fully occupied throughout the year, a total of 800 patients being admitted to hospital. There are 35 out-patient treatment centres.

19.6.2. The Regional Medical Officer, who is also Regional Tuberculosis Officer, has examined the progress made in the treatment of this disease since the regional scheme was started in 1959. He finds that since that date some 2,300 patients were diagnosed as suffering from pulmonary tuberculosis; of these 410 have now stopped drug treatment and are under surveillance; 1,135 are receiving drugs, the vast majority of them attending regularly at the treatment centres, and 210 patients are in hospital. The remaining 545 have been lost sight of for one reason or another, or have died. He estimates that there are a total of approximately 5,000 active cases of tuberculosis in the region, which means that since the inception of the scheme some 50 per cent of this total have been brought under treatment.

19.6.3. In the Lushoto and Handeni Districts B.C.G. vaccination campaigns have started and up to the end of the year 1,170 children had been vaccinated in the Lushoto area. B.C.G. vaccination is now also available at the infant welfare and toddler clinics conducted in the government out-patient department in Tanga, this vaccination being financed by the Tanga Town Council.

## 20. CENTRAL MEDICAL STORES

20.1. The reorganization of the stores services of the Ministry, whereby all stores officers, whether employed in the Central Medical Stores or in hospitals, come under the control of the Supplies Officer, mentioned in the 1961 Report, was implemented and was found to work successfully.

20.2. Accounting in the Stores is now entirely mechanical and as a result the store efficiency depends very heavily upon the employment of an experienced accounts machine operator. Only one such operator is employed, and during the year when there was a hiatus between the retirement of an operator and the recruitment of a replacement, account fell into arrears. A particular danger of such a happening is that stores stock control is very closely linked with the work of the accounting machine; stock holding is now at such a low level that a delay in implementing action by three to four weeks due to accounting delay might well result in essential items going out of stock. Even with maximum accounting efficiency there was a period in November, 1962, when stocks had fallen as low as £67,000 from £101,000 in July, and some items were almost exhausted. Arrangements have been made to make funds available to permit an increase of stores stock-holding, but even with these additional funds there will still be little room for manoeuvre or to cope with any unforeseen event resulting in delay in delivery.

20.3. Generally speaking Regional Medical Officers expressed their satisfaction with the services provided by the Central Stores Organization, although transport continues to be very difficult in the case of some of the more isolated hospitals.

# 21. THE REPORTS OF THE CLINICAL CONSULTANTS

## 21.1. Consultant Physicians

21.1.1. Towards the end of the year a third medical firm was established, primarily for teaching purposes, headed by a newly appointed Consultant Physician. Arrangements were also made for the creation of a fourth medical unit to come into existence on the arrival of a fourth Consultant Physician early in the New Year.

21.1.2. The Consultant Physicians report that during the year there was great pressure on female beds and rather less on male beds. The need to expand the female accommodation become evident, but it was not possible to effect this or to make plans for the provision of extra accommodation in the near future.

21.1.3. During the early part of the year famine conditions in the Rufiji District and elsewhere led to the appearance of an increasing number of cases of nutritional neuropathy in the hospital. A number of these were predominantly ataxic, while others were more typical of dry beri-beri.

21.1.4. It was possible to provide a medical officer to take charge of the tuberculosis work in Dar es Salaam, thus relieving the Consultant Physician of this duty.

21.1.5. Pressure on clinical and teaching duties in Dar es Salaam prevented the Consultants from doing any up-country visiting; with the improvement in the establishment towards the end of the year, it will now be possible for them to renew their visits to other centres.

21.1.6. The research work carried out by medical staff was somewhat limited, largely owing to pressure of routine duties. Drs. Meredith and Eyakuze made a thorough review of the anaemias treated in the Dar es Salaam hospitals. They found little or no advantage in parenteral iron preparations and advocated the occasional use of intraperitoneal blood transfusions. (E.A. Medical Journal, 39, 25th May, 1962.) Drs. Haddock, Ebrahim and Kapur made a study of the presumably nutritional ataxic neuropathy found in people from the Rufiji District and elsewhere (British Medical Journal, 1st December, 1962, page 1442). Drs. Haddock and Ebrahim are continuing their studies on nutritional neuropathy and the laboratory is now able to carry out pyruvate tolerance tests.

21.1.7. The last M.R.C. Tuberculosis Trials concluded early in the year and a new trial started towards the end of the year. It was at one time suggested that the thiazina tablets used in these trials might have a suppressive effect on the malaria parasites. This suggestion was investigated with the co-operation of the Consultant Malariologist, but no evidence of the suppressive effect was found.

21.1.8. Amongst the other points of interest might be mentioned a continuing trial of propaquine in the treatment of malaria, and of a new oral schistosomicidal drug.

## 21.2. Consultant Surgeons

21.2.1. Mid-way through the year the consultant out-patient clinics were transferred from the Ocean Road Hospital to the main hospital, thus effecting a considerable economy in respect of the surgeons' time.

21.2.2. The surgical division of the hospital has continued to comprise two general surgical firms, which consist of a Consultant Surgeon, a Registrar and two interns. It has not yet been possible to provide registrars of the standard required in surgical units of this type and in sufficient numbers.

21.2.3. The surgeons and their assistants took their full part in the teaching of medical assistants and in the up-grading courses leading to the appointment of medical assistants as Assistant Medical Officers.

21.2.4. During the year 4,148 operations were carried out in the main theatre as opposed to 3,993 in 1961, and in the out-patient clinics 3,409 as compared with 2,329 in 1961. The operative surgery performed covered a wide field. It excluded operative obstetrics, but included gynaecological, ear, nose and throat, and, towards the end of the year, ophthalmological operations. The bulk of the work may be classed under general surgery and consisted mainly of the surgery of trauma, orthopaedic surgery generally, herniae and hydroceles. The character of the operative procedures is changing with a far greater proportion of spinal operations, prostatectomies, Kuntsher nailings, Smith-Peterson nailings, pneumonectomies, lobectomies and thoracoplasties. Probably for the first time in Tanganyika three hindquarter amputations were performed successfully on patients for advanced malignancy of the lower limb.

### 21.3. CONSULTANT OPHTHALMOLOGIST

21.3.1. No Consultant Ophthalmologist was available during the year, but in the latter half of the year a medical officer with specialist ophthalmic experience arrived to re-organize the ophthalmic department in preparation for the arrival of an Ophthalmic Consultant at a later date. Prior to his arrival the ophthalmic work in Dar es Salaam was carried out on a sessional basis by a private practitioner specializing in ophthalmology. With the arrival of a Consultant Ophthalmologist the services of the medical officer will be retained as well, owing to the greatly increased demand for services from this department.

### 21.4. CONSULTANT ANAESTHETIST

21.4.1. The Consultant Anaesthetist reports that the number and magnitude of surgical procedures continued to increase, especially in the realm of thoracic surgery. The Epstein Macintosh Oxford Ether Inhaler is being increasingly used with very satisfactory results. The versatility of this machine is demonstrated whenever possible and its introduction into all district hospitals actively encouraged.

21.4.2. At the end of the year the staff consisted of a Consultant Anaesthetist and three medical officers. One of the latter successfully completed a course of instruction at Copenhagen, a second left for the United Kingdom for a course of instruction in preparation for the Fellowship of the Faculty of Aanesthetists, while the third is already an experienced anaesthetist with a Diploma in Anaesthetics.

### 21.5. CONSULTANT PAEDIATRICIAN

21.5.1. The clinical and teaching functions of the paediatric unit remain much the same as in previous years.

21.5.2. During the year it was decided to treat severe burns initially as a medical problem as opposed to the previous custom of admitting them into the surgical wards.

21.5.3. Among the admissions kwashiorkor, broncho-pneumonia and malaria appear to predominate.

21.5.4. The Consultant Paediatrician and his staff took their part in the various training schemes, including the training of medical assistants and midwives and of Assistant Medical Officers.

21.5.5. In association with the Senior Medical Officer, Health Education, a series of photographs illustrating the various passive exercises recommended for the treatment of the after effects of poliomyelitis was produced and at the end of the year was in the process of being reproduced for distribution. They constitute a simple guide easily understood by mothers.

21.5.6. At the request of Mr. Dennis Burkitt, F.R.C.S., of the Department of Surgery at Makerere University College, observations were made by members of the paediatric unit of the lymphoma syndrome in Tanganyika children. Investigations continued.

21.5.7. The Consultant Paediatrician visited Mpwapwa Teachers Training College to speak to a teachers training conference on the subject of the overall problems of child health. The series consisted of three lectures and was well received.

### 21.6. CONSULTANT GYNAECOLOGIST AND OBSTETRICIAN

21.6.1. At the beginning of the year the obsetetrical hospital was transferred from the Muhimbili wards to the Ocean Road Hospital, thereby increasing the number of beds available for obstetrics from 58 to 122. This accommodation appeared to be ample when first established, but as the year progressed the pressure on beds increased at an alarming speed and towards the end of the year normal post-natal cases found themselves discharged within 24 hours of delivery, as was the case previously in the grossly overcrowded Muhimbili Hospital. The average number of deliveries during the year was 430 per month. This figure excludes 178 mothers admitted whose babies had been born before they were admitted to hospital.

21.6.2. A new and interesting development of the work of the obstetric unit was the training of medical assistants during their up-grading course leading to appointment as Assistant Medical Officers. All medical assistants undergoing such training spent a period of residence at the maternity hospital.

### 21.7. CONSULTANT RADIOLOGIST

21.7.1. Once again the Consultant Radiologist reports an increase in the amount of work carried out in the radiological departments in Dar es Salaam. During 1962 the number of patients examined was approximately 50 per cent higher than during the previous year. This increase has thrown a considerable strain on the Radiologist, particularly in view of the fact that the second Radiologist was absent from the country for a considerable part of the year.

## 22. TRAINING OF PERSONNEL

22.1. The year was notable for important changes or impending changes in the types of training available at the government Medical Training Centre at Dar es Salaam. The training of Assistant Health Inspectors was replaced by a direct entry training at the level of Health Inspector and plans reached an advanced stage for the replacement of the Medical Assistants training course by a Medical Practitioners School. The upgrading courses mentioned in the 1961 Report were continued.

### 22.2. MEDICAL PRACTITIONERS

In the 1961 Report a direct entry training course for Assistant Medical Officers was foreshadowed at Dar es Salaam. Further discussions during the year, however, resulted instead in the higher aim of establishing early in 1963 a school for training doctors to internationally accepted standards. As mentioned in para. 1, the new medical school will supersede the training of medical assistants and will embody many of the existing training facilities at Dar es Salaam.

### 22.3. ASSISTANT MEDICAL OFFICERS

The training of Senior Medical Assistants/Medical Assistants for promotion to the grade of Assistant Medical Officer was intensified. During the year 36 candidates, including four voluntary agency medical assistants were selected for two upgrading courses, which lasted six months each and were held partly at Dar es Salaam and partly at the Rural Aid Centre at Ifakara. Since starting this type of training in 1961, 56 candidates had entry to the courses and 35 had successfully completed the training at the end of 1962.

### 22.4. MEDICAL ASSISTANTS

For reasons stated at paragraphs 1 and 2, there was no intake of first year student medical assistants at Dar es Salaam. The last class consisting of 30 students of this category completed the second year of their training at the end of 1962 and the course is expected to finish completely at the end of 1963, as far as the Dar es Salaam centre is concerned. The Bumbuli course, however, continued unchanged. There was an intake of 17 fresh students at the beginning of 1962 and 9 students successfully completed their training at the end of 1962 at this centre. Seventeen more medical assistants qualified at Dar es Salaam.

### 22.5. ASSISTANT HEALTH INSPECTORS/HEALTH INSPECTORS

As mentioned in paragraph 1, the *ab initio* training of Health Inspectors commenced in September, 1962, with six students. The last batch of 13 student Assistant Health Inspectors were in their final year of training, but as at the end of the year only five passed the qualifying examination a further intensive course of three months was arranged for 1963 for those who were unsuccessful. During the year there was another intake of 36 Assistant Health Inspectors, including six from Town Councils, to the fourth and fifth promotional courses for Health Inspectors. The promotional courses started in 1959 and at the end of 1962 a total of 57 Assistant Health Inspectors had been admitted to the courses and 17 had been promoted to the grade of Health Inspector.

### 22.6. RURAL MEDICAL AIDS

Plans were made during the year for a re-arrangement of the training of this cadre of staff. From 1963 the training course would be extended to three years, including six months of post-qualification practical attachment, and the running of the training at Mwanza would be shared between Government and the Swedish-Norwegian Radda Barnen organization at Bukoba. The practice of dispersing second year student rural medical aids to various regional hospitals was not conducive to uniformity and concentration in teaching and was, therefore, discontinued during the year.

As a result of these changes 42 second year students remained at Mwanza and there was no intake of new students to this centre during the year. There were eight students in the first year at Mnero and of a total of 49 students who appeared for the qualifying examination at the end of the year, all but one passed.

### 22.7. DENTAL TECHNICIANS

A new training for the cadre of Dental Technicians was commenced at the beginning of the year with 4 students. This is a very small cadre and only a few more courses will be required in future. The duration of these courses is three years and students are prepared for the London City and Guilds qualification. The training of Dental Assistants is closed and there were no students in this cadre during the year, but the upgrading courses leading to appointment as Assistant Dental Officer were continued and, at the end of the year, only one further upgrading course is necessary to complete the exercise.

### 22.8. LABORATORY ASSISTANTS, PHARMACEUTICAL ASSISTANTS

Two Laboratory Assistants and five Pharmaceutical Assistants qualified during the year. For reasons stated in the 1961 Report there was again no intake of new students to these cadres, but it was expected in 1963 to start training Laboratory Technicians to the intermediate level of A.I.M.L.T.

### 22.9. NURSING TRAINING

22.9.1. There were 243 students in training at the Nursing Training Centre, Dar es Salaam and 30 in training at the Nursing Training Centre, Tanga, at the beginning of the year. The 31 student nurses commencing training in Dar es Salaam had all had ten years formal education, and only 13 of them were girls. The 30 students commencing in Tanga were girls of Std. VIII education only.

22.9.2. A total of 59 students in Dar es Salaam completed their training successfully out of 63 who attempted the final examinations of the Tanganyika Nurses and Midwives Council in November. In addition 27 students sat for and passed the midwifery examination. The students in Tanga were all first year students, following the closure of the Health Nurses school, so that there were no finalists there.

22.9.3. The upgrading course for experienced nurses was continued throughout the year. Three government nurses graduated in January, a further 15 in March and two in October. Six students from voluntary agency hospitals also satisfied the Assessment Board of the Tanganyika Nurses' and Midwives' Council, graduating in March.

22.9.4. The revised nursing syllabus which includes the elements of public health nursing, midwifery and infant welfare was introduced in Dar es Salaam and Tanga with the first year students. The second year students in Dar es Salaam also changed to the new syllabus. This second year class was a very large one owing to the absorption of the nurses from the two Health Nurses' training schools closed by the end of 1961.

22.9.4. Four public health nurse educators from the World Health Organization came to Tanganyika in April and May to help with the training programmes here; one is stationed in Tanga and three are in Dar es Salaam. They have helped to make up for the loss of three government sister tutors who retired or were transferred during the year. Miss Bell, the Chief Nursing Officer of the World Health Organization for Africa visited the Nursing Training Centre, Dar es Salaam, in November.

### 22.9.5. *Village Midwives*

The training of village midwives continued at the three government training centres. Thirteen completed training during 1962. Difficulty is still being experienced in getting suitable older women for this type of training. Training was discontinued at Iringa early in the year.

### 22.10. VOLUNTARY AGFNCY TRAINING CENTRES

22.10.1. One hundred and eighty-one nurses started training in voluntary agency centres in January, 148 passed the nursing examination of the Tanganyika Nurses and Midwives Council and a further 71 qualified as midwives. Shirati hospital, Tarime, had nurses and Makiungu hospital, Singida, had midwives sitting examinations for the first time. All were successful. Bukumbi hospital, Lake Region, commenced nursing training with an intake of fifteen students.

22.10.2. Most of the voluntary agency training centres adopted the revised syllabus of the Tanganyika Nurses and Midwives Council during 1962, the remaining three hope to do so in the near future. Three more training centres were approved during 1962 to start training in 1963, all using the revised syllabus.

## 23. THE MEDICAL SERVICES PROVIDED BY THE VOLUNTARY AGENCIES

23.1. Tanganyika continues to owe a very substantial proportion of its hospital and dispensary services to the Christian Churches. An outline of the distribution of voluntary agency hospitals, etc., in each region was given in the 1961 Report and what follows describes only outstanding features and developments during 1962 and should therefore be read in conjunction with that Report.

23.2. Revised figures showing the amounts paid by Government in the form of direct subsidies to voluntary agency medical work in 1960/61 are given below together with details of payments in the financial year 1961/62.

| | 1960/61<br>£ | | 1961/62<br>£ |
|---|---|---|---|
| Staff Grants ... ... ... ... | 92,838 | ... | 97,061 |
| Training Grants ... ... ... | 18,040 | ... | 24,672 |
| Hospital Additional Grants ... ... | 33,501 | ... | 29,648 |
| | 144,379 | ... | 151,272 |

Brief mention has already been made of the financial difficulties facing the voluntary agencies as a result of increased running costs. In particular, inability to pay staff at the revised government salary rates unless very substantial additional subsidies can be provided, is causing great embarrassment.

23.3. In pursuit of the aim of closer integration between Government and voluntary agency services, a Working Party of the Mission Medical Advisory Committee was appointed by the Minister in the second half of the year to make recommendations for phased integration, for the allocation of any additional sums of money which might be made available for the subsidisation of voluntary agency medical work, and for the amendment of the present regulations governing the payment of grants. It is expected that the Working Party will be ready to report early in 1963.

23.4. There was considerable building activity during the year. In the Central Region good progress was made by the Diocese of Central Tanganyika in the building of their new leprosarium at Hombolo, and it is hoped that it will be possible to move all patients from the present leprosarium at Makutapora to the new site in mid-1963. In the Eastern Region the Capuchin Mission were building a 100-bed tuberculosis unit attached to their hospital at Ifakara, whilst in the Lake Region the Catholic Church of the Diocese of Mwanza had, by the end of the year, started to receive patients in their new hospital at Kibara, the building costs of which are being subsidised by the local council. This hospital, which will serve the population of the mainland in Ukerewe District, will eventually have a capacity of 120 beds. At the Sengerema hospital maintained by the same diocese in Geita District, a new midwifery training school and hostel was completed towards the end of the year. Other developments in this region included the opening of two new dispensaries by the Africa Inland Mission at Nassa and Butumbwe. In the Southern Region new tuberculosis wards were completed at the Lulindi hospital maintained by the Masasi Diocese of the Church of the Province of East Africa and at the Christian Missions in Many Lands hospital at Mbesa in Tunduru District. New bedded dispensaries were under construction by the Benedictines of the Abbacy of Peramiho at Namabengo and Lituhi. The latter is expected to achieve full hospital status by the appointment of a doctor. Building activity was greatest in the Southern Highlands Region. In the Catholic Diocese of Iringa new hospitals were being built at Igogwe in Rungwe District and at Tandala in Njombe District; a two-storeyed maternity hospital was under construction by the Benedictines at Uwemba in Njombe District; re-building of the Ilembula hospital of the Evangelical Church of Southern Tanganyika was almost completed. The new Moravian Mission Hospital at Mbosi in Mbeya District was opened and the Church of Christ Mission started a large hospital project at

Chimala in Mbeya District. In the Northern Region good progress was made towards completion of the new hospital buildings of the Machame hospital maintained by the Lutheran Church of Northern Tanganyika and in the Tanga Region a good start was made on the comprehensive building programme of the Bumbuli Hospital of the Usambara-Digo Lutheran Church. Elsewhere throughout the country many minor extensions and improvements to voluntary agency hospitals and dispensaries were effected.

23.5. In August, with the agreement of the local Council, the government bedded dispensary at Tunduru was handed over to the Christian Missions in Many Lands who are now providing a district hospital service and rural dispensary supervisory service based on their hospital at Mbesa.

23.6. Reports from many regions show that voluntary agencies are beginning to take a more active part in public health education in the areas surrounding their hospitals. Maternity and child health work has always been one of the most valuable contributions made by the voluntary agencies and the dissemination of public health propaganda through the medium of antenatal and child health clinics is in many places showing handsome dividends. In the Lake and West Lake Regions the Catholic Hospitals at Sumve and Kagondo and the Africa Inland Mission Hospital at Kola Ndoto co-operated during the year with the local councils in carrying out campaigns of B.C.G. vaccination amongst children, whilst in the Northern Region more than 11,000 doses of smallpox vaccine were administered by the staff of the Ndareda Hospital of the Medical Missionaries of Mary in co-operation with the local council.

23.7. Most voluntary agencies report little change in the disease pattern during 1962, the only serious epidemic being reported from the Moravian Mission Hospital at Sekonge where 36 cases of poliomyelitis occurred (mainly in children between the ages of 1 and 3 years) at a time when the area was more or less cut off by the rains; 400 doses of poliomyelitis vaccine were administered. From the Southern Region comes a report of a very satisfactory decrease in cases of cerebro-spinal meningitis in the Masasi/Newala area.

23.8. Two voluntary agency hospitals in the West Lake Region, the Catholic Hospital at Rulenge and the Evangelical Church of North-West Tanganyika hospital at Nyakahanga had their work greatly enhanced by the influx of refugees from over the border, and the medical assistance given by these hospitals was greatly appreciated by the Tanganyika Government.

23.9. Training of nurses, midwives, medical assistants, rural medical aids and village midwives continued, and excellent results, particularly in the case of nurses and midwives were obtained in the final qualifying examinations. At Bukumbi Hospital, Diocese of Mwanza, a Nurses' Training School opened at the beginning of the year, and a Midwifery School to give a one year midwifery course to trained nurses was opened at Makiungu in Singida District by the Medical Missionaries of Mary.

23.10. From the Central and Northern Regions a number of voluntary agency hospitals report the receipt of a welcome and most useful gift of a radio-transceiver from the African Medical and Research Foundation. At Mvumi Hospital of the Diocese of Central Tanganyika an air-strip was made by communal effort and is now in regular use by the air ambulance service of the Foundation.

## 24. THE RURAL MEDICAL SERVICES

24.1. The medical services in rural areas are, generally speaking, provided by units, the financial responsibility for which is vested in local authorities. There are a few exceptions to this statement as a limited number of government dispensaries still exist; these dispensaries without exception have some historical reason for their establishment although in almost every case this reason has now disappeared. It is the policy of the Ministry of Health that they should be handed over to local authorities as soon as the appropriate authority is able to accept the financial responsibility for them.

24.2. Owing to the conditions of financial stringency ruling during the year, local authorities were able to make little or no provision for the expansion of their medical services. In some places existing dispensary buildings were improved, enlarged, or replaced as part of the "self-help" campaign. Elsewhere uncontrolled enthusiasm led to the construction of dispensaries beyond the means of the local authority to make financial provision for staff, equipment or drugs. By the end of the year, however, the position had improved.

24.3. In spite of the adverse conditions a total of eight new dispensaries were opened during the year and in addition eight Grade "B" dispensaries were up-graded to "A" status, while three units were converted to rural health centres. On the other hand, of the three Grade "A" dispensaries owned by the Arusha District Council, one was closed throughout the year and another for six months.

24. Supervision of the rural medical services by district medical officers continued to be a problem, both because of the distances involved and the frequently adverse travelling conditions, and also because of the lack of experienced medical officers available to fill district medical officer vacancies. Although it has been possible to maintain the staffing of district hospitals at an acceptable level, in many instances the doctor filling the post of district medical officer is young or inexperienced.

## 25. THE DISTRICT NURSING SERVICE, DAR ES SALAAM

25.1. This relatively new service expanded considerably during the year. The staff has been increased from one Nursing Sister at the beginning of the year to two Nursing Sisters and one Staff Nurse by the 1st November. All staff working on the district now hold the Overseas Certificate of the Queen's Institute of District Nursing having passed their examinations in England during the year.

25.2. Patients have been received from most wards of the Dar es Salaam hospitals and have been of all ages. Short-term cases have mostly been suffering from sepsis and chest infections (particularly children). Long-term patients have included many cases of tuberculosis (all types), diabetes and carcinoma. Some of these have required care for over a year now. Wherever possible practical nursing has been supplemented by health teaching and the social aspects of disease. Most emphasis has been given to the teaching of nutrition and environmental hygiene.

25.3. Visits have almost doubled since the beginning of the year, coinciding with the increase in staff, and averaged 400 a month at the end of the year.

25.4. The voluntary agencies have been approached on numerous occasions for help not available through statutory sources and have always helped willingly and generously.

25.5. Two nurses (training grade) have been under instruction during the year and have learned all aspects of district management and public health nursing. General nursing trainees also receive limited instruction from the staff of the district nursing service.

## 26. LEGISLATION

26.1. The principal event of the year was the bringing into force, after very considerable delay, of the Pharmacy and Poisons Ordinance and the simultaneous publication of the Pharmacy and Poisons Rules, 1962 and the Poisons List (Cofirmation) Order, 1962. Among the changes brought about by this new legislation are:—

(a) it becomes an offence for any person other than those listed in the Ordinance to be in possession of a Part I poison;

(b) no licence for wholesale dealing may be issued unless the licensee is himself, or has in his employ, a registered pharmacist; and,

(c) an import permit is required for the importation of Part I poisons from Kenya and Uganda.

26.2. There were also several minor amendments of the Regulations made vide the Medical and Dental Practitioners Ordinance, particularly in respect of conditions prerequisite to registration.

AC.

TANGANYIKA

MINISTRY OF HEALTH

# Annual Report
of the
# Health Division
# 1962

## VOLUME II

(*Statistics*)

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# Health Division

# 1962

## VOLUME II

*(Statistics)*

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# PART I

## Staff

# TABLE I

## ESTABLISHMENT

*(as at 31st December, 1962)*

### Administration

| | |
|---|---|
| 1 | Minister for Health. |
| 1 | Parliamentary Secretary. |
| 1 | Permanent Secretary. |
| 1 | Principal Assistant Secretary. |
| 2 | Assistant Secretaries. |
| 3 | Secretaries. |
| 1 | Senior Accountant. |
| 1 | Accountant. |
| 9 | Assistant Accountants. |
| 13 | Accounts Assistants. |
| 4 | Assistant Establishment Officers. |
| 1 | Establishment Assistant. |
| 11 | Office Supervisors. |
| 29 | Executive Officers. |
| 173 | Clerical Officers. |
| 20 | Typists. |
| 22 | Clerical Assistants. |
| 10 | Personal Secretaries/Stenographers/Audio-Typists. |
| 1 | Library Assistant. |
| 1 | Statistic Assistant. |
| 30 | Telephone Operators. |

### Health Division

| | |
|---|---|
| 1 | Chief Medical Officer. |
| 1 | Deputy Chief Medical Officer. |
| 3 | Principal Medical Officers. |
| 2 | Senior Specialists. |
| 12 | Specialists. |
| 24 | Senior Medical Officers. |
| 124 | Medical Officers/Medical Registrars/Assistant Surgeons. |
| 2 | Senior Assistant Medical Officers. |
| 66 | Assistant Medical Officers. |
| 1 | Principal Pathologist. |
| 1 | Senior Pathologist. |
| 3 | Pathologists. |
| 1 | Government Chemist. |
| 3 | Chemists. |
| 1 | Principal Dental Surgeon. |
| 6 | Dental Surgeons. |

| | |
|---|---|
| 12 | Assistant Dental Officers. |
| 1 | Principal Matron. |
| 1 | Senior Sister Tutor. |
| 8 | Sister Tutors. |
| 18 | Matrons/Senior Charge Nurses. |
| 144 | Nursing Sisters/Charge Nurses. |
| 32 | Senior Staff Nurses. |
| 767 | Nurses/Senior Nurses. |
| 50 | Nursing Auxiliaries. |
| 1,654 | Nursing Orderlies. |
| 1 | Supervisor, Isanga. |
| 7 | Senior Nursing Attendants. |
| 52 | Nursing Attendants. |
| 15 | Housekeepers/Wardens. |
| 26 | Senior Medical Assistants. |
| 176 | Medical Assistants. |
| 26 | Rural Medical Aids. |
| 1 | Chief Pharmacist. |
| 3 | Pharmacists. |
| 1 | Senior Compounder. |
| 6 | Assistant Pharmacists. |
| 5 | Senior Pharmaceutical Assistants. |
| 39 | Pharmaceutical Assistants. |
| 7 | Senior Laboratory Technicians/Technologists. |
| 52 | Laboratory Technicians/Laboratory Assistants. |
| 70 | Laboratory Auxiliaries. |
| 4 | Assistant Chemists. |
| 3 | Senior Chemical Assistants. |
| 6 | Chemical Assistants. |
| 1 | Senior Dental Technician. |
| 2 | Dental Technicians. |
| 1 | Assistant Dental Technician. |
| 8 | Dental Assistants. |
| 1 | Senior Hospital Secretary. |
| 4 | Senior Hospital Administrative Assistants. |
| 6 | Hospital Administrative Assistants. |
| 1 | Hospital Welfare Officer. |
| 1 | Laundry Manager. |
| 1 | Laundry Foreman. |
| 3 | Medical Instructors. |
| 2 | Teachers. |
| 4 | Physiotherapists. |
| 1 | Senior Radiographer. |
| 8 | Radiographers. |
| 12 | Radiological Auxiliaries. |
| 1 | Radiological Technician. |
| 1 | X-Ray Mechanic. |

| | |
|---|---|
| 1 | Foreman Transport. |
| 1 | Head Attendant. |
| 8 | Motor Drivers. |
| 568 | Subordinate Staff. |
| 1 | Supplies Officer. |
| 1 | Stores Officer. |
| 5 | Assistant Stores Officers. |
| 32 | Stores Assistants. |
| 1 | Security Assistant. |
| 1 | Chief Health Inspector. |
| 44 | Health Inspectors. |
| 1 | Senior Assistant Health Inspector. |
| 82 | Assistant Health Inspectors. |
| 27 | Sanitary Inspectors. |
| 2 | Senior Health Visitors. |
| 21 | Health Visitors. |
| 107 | Health Nurses/Senior Health Nurses. |
| 2 | Entomologists. |
| 4 | Malaria Field Officers. |
| 3 | Senior Malaria Assistants. |
| 31 | Malaria Assistants. |
| 8 | Sleeping Sickness Auxiliaries. |
| 5 | Nutrition Officers. |
| 1 | Printing Auxiliary. |

# PART II

## Training

# TABLE II

# MEDICAL TRAINING

## Approved Medical and Nursing Training Centres

| Category of Student | Training Centre | Training Authority | Length of Course (Years) | Total Students under Training 1962 | Students Qualified 1962 | Total Qualified in each category 1962 |
|---|---|---|---|---|---|---|
| Medical Assistants ... ... | Dar es Salaam ... ... | Government ... ... ... | 3 | 69* | 17† | 26 |
|  | Bumbuli ... ... ... | Lutheran Mission ... ... | 3 | 39 | 9 |  |
| Laboratory Assistants ... ... | Dar es Salaam ... ... | Government ... ... ... | 3 | 6 | 5 | 5 |
| Pharmaceutical Assistants ... | Dar es Salaam ... ... | Government ... ... ... | 3 | 9 | 9 | 9 |
| Rural Medical Aids ... ... | Mwanza ... ... ... | Government ... ... ... | 2 | 42 | 37 | 48 |
|  | Mnero ... ... ... | Benedictine Mission ... ... | 2 | 33 | 11 |  |
| Assistant Health Inspectors ... | Dar es Salaam ... ... | Government ... ... ... | 3 | 13‡ | 1 | 1 |
| Nurses ... ... ... ... | Tanga ... ... ... ... | Government ... ... ... | 2 | 30 | 24 | 209 |
|  | Dar es Salaam ... ... | Government ... ... ... | 3 | 189 | 59 |  |
|  | Magila ... ... ... | U.M.C.A. ... ... ... | 3 | 42 | 15 |  |
|  | Lulindi ... ... ... | U.M.C.A. ... ... ... | 3 | 58 | 12 |  |
|  | Peramiho ... ... ... | Benedictine Mission ... ... | 3 | 57 | 12 |  |
|  | Sumve ... ... ... | White Fathers ... ... | 3 | 63 | 21 |  |
|  | Kola Ndoto ... ... ... | African Inland Mission ... | 3 | 35 | — |  |
|  | Shirati ... ... ... | Mennonite Mission ... ... | 3 | 33 | 9 |  |
|  | Mvumi ... ... ... | C.M.S. ... ... ... | 3 | 80 | 20 |  |
|  | Kiomboi ... ... ... | Augustana Lutheran... ... | 3 | 42 | 9 |  |
|  | Ndolage ... ... ... | Church of Sweden ... ... | 3 | 36 | 14 |  |
|  | Ndareda ... ... ... | Medical Missionaries of Mary | 3 | 48 | 14 |  |
| Midwives ... ... ... ... | Dar es Salaam ... ... | Government ... ... ... | 1 | 30 | 24 | 76 |
|  | Sumve ... ... ... | White Fathers ... ... | 1 | 9 | 7 |  |
|  | Ndanda ... ... ... | Benedictine Mission ... ... | 1 | 22 | 15 |  |
|  | Magila ... ... ... | U.M.C.A. ... ... ... | 1 | 3 | 2 |  |
|  | Kilimatinde ... ... ... | C.M.S. ... ... ... | 1 | 12 | 12 |  |
|  | Makiungu ... ... ... | Catholic Mission ... ... | 1 | 5 | 5 |  |
|  | Mvumi ... ... ... | C.M.S. ... ... ... | 1 | 11 | 11 |  |
| Village Midwives ... ... ... | Newala ... ... ... | U.M.C.A. ... ... ... | 2 | 12 | 5 | 26 |
|  | Korogwe ... ... ... | U.M.C.A. ... ... ... | 2 | 6 | 2 |  |
|  | Liuli ... ... ... ... | U.M.C.A. ... ... ... | 2 | 2 | 1 |  |
|  | Kagunguli ... ... ... | U.M.C.A. ... ... ... | 2 | 12 | 4 |  |
|  | Arusha ... ... ... | Government ... ... ... | 1 | 6 | 4 |  |
|  | Tabora ... ... ... | Government ... ... ... | 1 | 5 | 5 |  |
|  | Nzega ... ... ... ... | Government ... ... ... | 1 | 12 | 5 |  |
| Charge Nurses and Nursing Sisters (Training Grade) ... | Dar es Salaam ... ... | Government ... ... ... | 1 | 30 | 24 | 24 |
| Assistant Medical Officers (promotion on trial) ... ... | Dar es Salaam ... ... | Government ... ... ... | ½ | 56 | 23 | 23 |
| Health Inspectors (promotion on trial) ... ... ... ... | Dar es Salaam ... ... | Government ... ... ... | 1 | 44 | 9 | 9 |
| Health Inspectors (Pre-Service Courses)... ... ... ... | Dar es Salaam ... ... | Government ... ... ... | 3 | 6 | — | — |
| Dental Technicians (Pre-Service Courses)... ... ... ... | Dar es Salaam ... ... | Government ... ... ... | 3 | 4 | — | — |

*Includes 6 Rural Medical Aids.

†Including 1 ex-Rural Medical Aid

# PART III

# Hospital and Dispensary Services

# TABLE III

## GOVERNMENT HOSPITALS AND DISPENSARIES

as at 31st December, 1962

| Province | Hospital | No. of Wards | Number and Category of Beds | | | | | | Grade of Accommodation |
|---|---|---|---|---|---|---|---|---|---|
| | | | General | Obstetrics | Tuberculosis | Infectious | Mental | Total | |
| | | | I.—GENERAL HOSPITALS | | | | | | |
| Dar es Salaam ... ... ... ... | Dar es Salaam ... ... | 59 | 514 | 120 | 154 | 72 | 10 | 870 | I, II and IV |
| Central ... ... ... ... ... | Dodoma ... ... | 18 | 136 | 14 | 84 | 14 | – | 248 | I, II, III and IV |
| | Singida ... ... ... | 8 | 52 | – | – | 8 | – | 60 | IV |
| | Mpwapwa ... ... | 5 | 27 | 5 | – | – | – | 32 | IV |
| | Kondoa ... ... ... | 4 | 38 | 4 | – | 4 | – | 46 | IV |
| Eastern ... ... ... ... ... | Morogoro ... ... | 16 | 162 | 14 | – | 8 | – | 184 | I, II and IV |
| | Kilosa ... ... ... | 8 | 75 | 13 | – | 12 | – | 100 | II, III and IV |
| | Mahenge... ... ... | 10 | 73 | 1 | – | 4 | – | 78 | III and IV |
| | Bagamoyo ... ... | 5 | 32 | 4 | – | 3 | – | 39 | IV |
| | Utete ... ... ... | 4 | 35 | – | – | – | – | 35 | IV |
| Lake ... ... ... ... ... | Mwanza ... ... ... | 19 | 178 | 17 | 14 | 13 | – | 222 | I, III and IV |
| | Musoma ... ... | 12 | 75 | 15 | – | 4 | – | 94 | I, II and IV |
| | Ukerewe ... ... | 5 | 52 | – | – | 8 | – | 60 | IV |
| | Shinyanga ... ... | 6 | 64 | 13 | – | 6 | – | 83 | II and IV |
| | Maswa ... ... ... | 5 | 52 | – | – | 8 | – | 60 | IV |
| | Geita ... ... ... | 5 | 52 | – | – | 8 | – | 60 | IV |
| | Tarime ... ... ... | 5 | 54 | 2 | – | 4 | – | 60 | IV |
| Northern ... ... ... ... ... | Arusha ... ... ... | 19 | 137 | 16 | – | 9 | – | 162 | I, II, III and IV |
| | Moshi ... ... ... | 15 | 219 | 16 | – | 24 | – | 259 | II, III and IV |
| | Mbulu ... ... ... | 5 | 62 | 6 | 36 | – | – | 104 | IV |
| | Monduli ... ... ... | 5 | 47 | 1 | 10 | – | – | 58 | IV |
| Southern ... ... ... ... ... | Mtwara ... ... ... | 6 | 40 | 4 | 15 | – | – | 59 | I, II, III and IV |
| | Lindi ... ... ... | 7 | 77 | 13 | 13 | – | – | 103 | I, III and IV |
| | Nachingwea ... ... | 7 | 48 | 6 | 45 | 4 | – | 103 | I, II, III and IV |
| | Songea ... ... ... | 6 | 39 | 6 | 21 | 2 | – | 68 | III and IV |
| | Kilwa ... ... ... | 5 | 30 | – | – | 6 | – | 36 | IV |
| | Newala ... ... ... | 5 | 28 | – | 22 | – | – | 50 | IV |
| Southern Highlands ... ... ... | Mbeya ... ... ... | 19 | 132 | 12 | 6 | 4 | – | 154 | I, II and IV |
| | Iringa ... ... ... | 22 | 107 | 17 | 4 | 4 | – | 132 | I, II and IV |
| | Tukuyu ... ... ... | 6 | 91 | 13 | – | 8 | – | 112 | IV |
| | Njombe ... ... ... | 4 | 31 | – | 8 | – | – | 39 | I and IV |
| | Kyela ... ... ... | 4 | 52 | – | – | 8 | – | 60 | IV |

## TABLE III—(*contd.*)

## GOVERNMENT HOSPITALS AND DISPENSARIES

as at 31st December, 1962

| Province | Hospital | No. of Wards | Number and Category of Beds | | | | | | Grade of Accommodation |
|---|---|---|---|---|---|---|---|---|---|
| | | | General | Obstetrics | Tuberculosis | Infectious | Mental | Total | |
| | | | | I.—GENERAL HOSPITAL (contd.) | | | | | |
| Tanga ... ... ... ... ... | Tanga ... ... ... | 18 | 288 | 36 | 86 | – | – | 410 | I, II and IV |
| | Korogwe... ... ... | 7 | 75 | 6 | 24 | 11 | – | 116 | I, II and IV |
| | Lushoto ... ... ... | 10 | 28 | 3 | 22 | 4 | – | 57 | I and IV |
| | Muheza ... ... ... | 7 | 52 | – | 46 | 8 | – | 106 | IV |
| | Pangani ... ... ... | 8 | 19 | 6 | – | 1 | – | 26 | IV |
| | Same ... ... ... | 3 | 25 | 1 | – | 4 | – | 30 | IV |
| | Handeni ... ... ... | 4 | 51 | – | – | 7 | – | 58 | IV |
| Western ... ... ... ... ... | Tabora ... ... ... | 18 | 166 | 24 | 10 | 8 | – | 208 | I, III and IV |
| | Kigoma ... ... ... | 6 | 60 | 8 | – | – | – | 68 | II and IV |
| | Nzega ... ... ... | 8 | 55 | 32 | 8 | 1 | – | 96 | II, III and IV |
| | Kibondo ... ... | 5 | 38 | 15 | – | 8 | – | 60 | IV |
| | Sumbawanga ... ... | 7 | 62 | 9 | 11 | – | – | 82 | IV |
| | Kahama ... ... ... | 5 | 38 | 16 | 10 | – | – | 64 | IV |
| | Kasulu ... ... ... | 4 | 52 | – | – | 8 | – | 60 | IV |
| West Lake ... ... ... ... | Bukoba ... ... ... | 8 | 103 | 14 | 12 | 1 | – | 130 | I, II, III and IV |
| | Biharamulo ... ... | 5 | 35 | 4 | 3 | – | – | 42 | IV |
| TOTAL—GENERAL HOSPITALS ... ... | 49 | 449 | 3,958 | 505 | 664 | 306 | 10 | 5,357 | |
| | | | | II.—SPECIAL HOSPITALS | | | | | |
| Central ... ... ... ... ... | Mirembe Mental ... | 35 | – | – | – | – | 746 | 746 | I, II and IV |
| | Isanga Mental ... ... | 20 | – | – | – | – | 246 | 246 | II and IV |
| Eastern ... ... ... ... ... | Chazi Leprosy ... ... | 3 | – | 1 | – | 35 | – | 36 | IV |
| Northern ... ... ... ... ... | Kibongoto Tuberculosis | 7 | – | – | 252 | – | – | 252 | III and IV |
| Southern Highlands ... ... ... | Makete Leprosy ... | 4 | – | 2 | – | 34 | – | 36 | IV |
| TOTAL—SPECIAL HOSPITALS ... ... | 5 | 69 | – | 3 | 252 | 69 | 992 | 1,316 | |

## TABLE III—(*contd.*)

## GOVERNMENT HOSPITALS AND DISPENSARIES

as at 31st December, 1962

| Province | Hospital | No. of Wards | Number and Category of Beds | | | | | | Grade of Accommodation |
|---|---|---|---|---|---|---|---|---|---|
| | | | General | Obstetrics | Tuberculosis | Infectious | Mental | Total | |
| | | | | III.—Dispensaries | | | | | |
| Dar es Salaam | Ukonga | 1 | 10 | – | – | – | – | 10 | IV |
| Central | Manyoni | 4 | 17 | 3 | – | 2 | – | 22 | IV |
| | Itigi | 2 | 12 | – | – | – | – | 12 | IV |
| | Kongwa | 3 | 18 | 2 | – | – | – | 20 | IV |
| Eastern | Mafia | 6 | 15 | 1 | 1 | 1 | – | 18 | IV |
| | Kingolwira | 3 | 33 | – | – | – | – | 33 | IV |
| | Wami | 1 | 4 | – | – | – | – | 4 | IV |
| | Malindi | 1 | 10 | – | – | – | – | 10 | IV |
| | Ruvu | 2 | 10 | – | – | – | – | 10 | IV |
| Lake | Ngudu | 2 | 16 | – | – | – | – | 16 | IV |
| Northern | Oldeani | 8 | 26 | 6 | 20 | 8 | – | 60 | II and IV |
| | Siha | 3 | 20 | 2 | – | – | – | 22 | IV |
| | Magugu | 2 | 10 | – | – | – | – | 10 | IV |
| Southern | Liwale | 2 | 20 | – | – | – | – | 20 | IV |
| S. Highlands | Malangali | 4 | 23 | 4 | – | – | – | 27 | IV |
| | Chunya | 7 | 18 | 4 | 4 | 4 | – | 30 | IV |
| Tanga | Usangi | 5 | 34 | 4 | – | 6 | – | 44 | IV |
| Western | Mpanda | 2 | 10 | – | – | – | – | 10 | IV |
| West Lake | Ngara | 2 | 24 | – | – | – | – | 24 | IV |
| TOTAL DISPENSARIES | 19 | 60 | 330 | 26 | 25 | 21 | – | 402 | |
| TERRITORIAL TOTAL | 73 | 578 | 4,288 | 534 | 931 | 396 | 1,002 | 7,075 | |

## TABLE IV

### IN-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

Figures refer to twelve-month period 1st December, 1961 to 30th November, 1962

| Province | Number admitted during the year | | | Number discharged during the year | | | Deaths | | | Daily average in Hospital | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| I.—General Hospitals | | | | | | | | | | | | |
| Dar es Salaam ... ... ... ... | 7,273 | 11,308 | 18,581 | 6,902 | 11,122 | 18,024 | 301 | 208 | 509 | 348·06 | 299·21 | 647·27 |
| Central ... ... ... ... ... | 5,902 | 6,186 | 12,088 | 5,822 | 5,813 | 11,635 | 223 | 255 | 478 | 162·90 | 189·90 | 352·80 |
| Eastern ... ... ... ... ... | 6,351 | 6,351 | 12,702 | 6,137 | 6,241 | 12,378 | 138 | 90 | 228 | 177·98 | 136·34 | 314·32 |
| Lake* ... ... ... ... ... | 9,338 | 10,618 | 19,956 | 8,969 | 10,243 | 19,212 | 315 | 305 | 620 | 284·86 | 212·19 | 497·05 |
| Northern ... ... ... ... ... | 10,243 | 11,075 | 21,318 | 9,661 | 10,648 | 20,309 | 474 | 355 | 829 | 268·00 | 248·00 | 516·00 |
| Southern ... ... ... ... ... | 4,769 | 3,906 | 8,675 | 4,671 | 3,807 | 8,478 | 111 | 77 | 188 | 188·70 | 150·18 | 338·88 |
| Southern Highlands ... ... ... | 6,006 | 5,502 | 11,508 | 5,980 | 5,572 | 11,552 | 178 | 156 | 334 | 157·60 | 127·45 | 285·05 |
| Tanga ... ... ... ... ... | 9,799 | 7,677 | 17,476 | 9,357 | 7,419 | 16,776 | 363 | 212 | 575 | 374·83 | 226·46 | 601·29 |
| Western ... ... ... ... ... | 7,829 | 9,807 | 17,636 | 7,519 | 9,520 | 17,039 | 287 | 278 | 565 | 278·29 | 246·64 | 524·93 |
| West Lake ... ... ... ... | 2,670 | 2,677 | 5,347 | 2,544 | 2,611 | 5,155 | 126 | 60 | 186 | 86·76 | 52·42 | 139·18 |
| Total—General Hospitals ... ... | 70,180 | 75,107 | 145.287 | 67,562 | 72,996 | 140.558 | 2,516 | 1,996 | 4,512 | 2,327·98 | 1,888·79 | 4,216·77 |
| II.—Special Hospitals | | | | | | | | | | | | |
| Central: | | | | | | | | | | | | |
| Mirembe Hospital ... ... ... | 411 | 184 | 595 | 332 | 181 | 513 | 39 | 20 | 59 | 540·00 | 229·25 | 769·25 |
| Isanga Institution ... ... ... | 75 | 10 | 85 | 62 | 10 | 72 | 10 | 1 | 11 | 225·00 | 37·00 | 262·00 |
| Eastern: | | | | | | | | | | | | |
| Chazi Leprosy Hospital ... ... | 1,059 | 349 | 1,408 | 1,043 | 343 | 1,386 | – | – | – | 14·03 | 4·31 | 18·34 |
| Northern: | | | | | | | | | | | | |
| Kibongoto Tuberculosis Hospital ... | 663 | 397 | 1,060 | 535 | 329 | 864 | 38 | 22 | 60 | 116·00 | 85·00 | 201·00 |
| Tanga: | | | | | | | | | | | | |
| Infectious Diseases Hospital ... ... | 350 | – | 350 | 156 | – | 156 | 26 | – | 26 | 86·94 | – | 86·94 |
| Southern Highlands: | | | | | | | | | | | | |
| Makete Leprosy ... ... ... | 225 | 175 | 400 | 21 | 13 | 34 | 22 | 13 | 35 | 13·72 | 15·95 | 29·67 |
| Total—Special Hospitals ... ... | 2,783 | 1,115 | 3,898 | 2,149 | 876 | 3,025 | 135 | 56 | 191 | 995·69 | 371·51 | 1,367·20 |

*Figures for period 1st December, 1961 to 31st December, 1962.

## TABLE IV—(*contd.*)

### IN-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

Figures refer to twelve-month period 1st December, 1961 to 30th November, 1962

| Province | Number admitted during the year | | | Number discharged during the year | | | Deaths | | | Daily average in Hospital | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| III.—Dispensaries | | | | | | | | | | | | |
| Central ... ... ... ... ... | 1,019 | 1,027 | 2,046 | 978 | 1,002 | 1,980 | 41 | 26 | 67 | 22·70 | 22·29 | 44·99 |
| Eastern ... ... ... ... ... | 1,323 | 419 | 1,742 | 1,263 | 409 | 1,672 | 11 | 9 | 20 | 11·06 | 8·03 | 19·09 |
| Lake ... ... ... ... ... | 382 | 395 | 777 | 369 | 385 | 754 | 12 | 10 | 22 | 9·00 | 6·00 | 15·00 |
| Northern ... ... ... ... ... | 793 | 1,114 | 1,907 | 757 | 1,410 | 2,167 | 25 | 27 | 52 | 38·52 | 52·68 | 91·20 |
| Southern ... ... ... ... ... | 209 | 204 | 413 | 199 | 197 | 396 | 10 | 7 | 17 | 5·67 | 4,94 | 10·61 |
| Southern Highlands ... ... ... | 2,689 | 2,590 | 5,279 | 2,642 | 2,551 | 5,193 | 55 | 34 | 89 | 49·72 | 44·95 | 94·67 |
| Tanga ... ... ... ... ... | 781 | 1,126 | 1,907 | 779 | 1,098 | 1,877 | 19 | 25 | 44 | 15·07 | 21·04 | 36·11 |
| Western ... ... ... ... ... | 318 | 126 | 444 | 309 | 109 | 418 | 11 | 18 | 29 | 4·70 | 4·60 | 9·30 |
| West Lake ... ... ... ... | 395 | 410 | 805 | 384 | 396 | 780 | 11 | 4 | 15 | 10·42 | 9·81 | 20·23 |
| Total—Dispensaries ... ... ... | 7,909 | 7,411 | 15,320 | 7,680 | 7,557 | 15,237 | 195 | 160 | 355 | 166·86 | 174·34 | 341·20 |
| Territorial Totals ... ... ... | 80,872 | 83,633 | 164,505 | 77,391 | 81,429 | 158,820 | 2,846 | 2,212 | 5,058 | 3,490·53 | 2,434·64 | 5,925·17 |

# TABLE V

## OUT-PATIENTS—GOVERNMENT GENERAL AND SPECIAL HOSPITALS AND DISPENSARIES

Figures for the twelve-month period 1st December, 1961 to 30th November, 1962

### I.—General Hospitals

| PROVINCE | Total Attendances | | | Total New Cases | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| Dar es Salaam ... ... | 601,899 | 463,267 | 1,065,166 | 210,185 | 161,520 | 371,705 |
| Central ... ... ... | 146,803 | 152,818 | 299,621 | 60,930 | 55,228 | 116,158 |
| Eastern ... ... ... | 196,527 | 149,713 | 346,240 | 79,224 | 67,170 | 146,394 |
| Lake ... ... ... | 327,309 | 291,084 | 618,393 | 144,062 | 132,245 | 276,307 |
| Northern ... ... ... | 274,660 | 219,008 | 493,668 | 107,934 | 88,920 | 196,854 |
| Southern ... ... ... | 238,854 | 154,977 | 393,831 | 103,130 | 79,760 | 182,890 |
| Southern Highlands ... | 208,686 | 163,514 | 372,200 | 84,884 | 67,194 | 152,078 |
| Tanga ... ... ... | 438,235 | 203,856 | 642,091 | 127,887 | 79,446 | 207,333 |
| Western ... ... ... | 265,485 | 238,444 | 503,929 | 140,803 | 127,413 | 268,216 |
| West Lake... ... ... | 68,682 | 45,084 | 113,766 | 38,881 | 23,823 | 62,704 |
| Total—General Hospitals ... | 2,767,140 | 2,081,765 | 4,848,905 | 1,097,920 | 882,719 | 1,980,639 |

### II.—Special Hospitals

| PROVINCE | Total Attendances | | | Total New Cases | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| Dar es Salaam: | | | | | | |
| Infectious Diseases Hospital ... ... | 36,952 | 25,067 | 62,019 | 508 | 217 | 725 |
| Central: | | | | | | |
| Mirembe Mental Hospital ... ... | 5 | 3 | 8 | 1 | 3 | 4 |
| Eastern: | | | | | | |
| Chazi Leprosarium ... ... ... | 3,055 | 1,534 | 4,589 | 1,862 | 897 | 2,759 |
| Northern: | | | | | | |
| Kibongoto Tuberculosis Hospital ... | 42,949 | 103,425 | 146,374 | 18,513 | 19,111 | 37,624 |
| Tanga: | | | | | | |
| Infectious Diseases Hospital ... ... | 14,751 | 10,900 | 25,651 | 4,706 | 3,385 | 8,091 |
| Total—Special Hospitals ... ... | 97,712 | 140,929 | 238,641 | 25,590 | 23,613 | 49,203 |

### III.—Dispensaries

| PROVINCE | Total Attendances | | | Total New Cases | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| Central ... ... ... | 47,229 | 48,271 | 95,500 | 22,960 | 23,254 | 46,214 |
| Eastern ... ... ... | 112,839 | 88,730 | 201,569 | 40,652 | 31,284 | 71,936 |
| Lake ... ... ... | 38,822 | 37,990 | 76,812 | 10,814 | 8,627 | 19,441 |
| Northern ... ... ... | 48,858 | 47,078 | 95,936 | 19,807 | 16,511 | 36,318 |
| Southern ... ... ... | 28,467 | 22,854 | 51,321 | 8,121 | 5,847 | 13,968 |
| Southern Highlands ... | 85,529 | 71,670 | 157,199 | 50,746 | 44,762 | 95,508 |
| Tanga ... ... ... | 47,071 | 64,373 | 111,444 | 20,460 | 26,277 | 46,737 |
| Western ... ... ... | 33,292 | 25,936 | 59,228 | 18,092 | 14,941 | 33,033 |
| West Lake ... ... | 18,416 | 17,250 | 35,666 | 10,241 | 9,289 | 19,530 |
| Total—Dispensaries ... | 460,523 | 424,152 | 884,675 | 201,893 | 180,792 | 382,685 |
| Territorial Totals ... | 3,325,375 | 2,646,846 | 5,972,221 | 1,325,403 | 1,087,124 | 2,412,527 |

# TABLE VI

## MATERNITY AND CHILD HEALTH SERVICES

| Province | Ante-Natal Clinics | | | Child Health Clinics | | | Total Confinements attended | Deliveries without Complications | Deliveries with Complications | Abortions | Live Births | Still Births | Maternal Deaths | Deaths of Infants |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Clinics | First attendances | Total attendances | No. of Clinics | First attendances | Total attendances | | | | | | | | |
| | | | | | A. Government Services | | | | | | | | | |
| Central ... ... ... | 7 | 3,694 | 14,016 | 4 | 2,370 | 18,749 | 1,442 | 1,179 | 263 | 208 | 1,397 | 45 | 15 | 13 |
| Eastern ... ... ... | 6 | 2,338 | 12.703 | 7 | 2,005 | 12,117 | 2,005 | 1,668 | 231 | 126 | 1,925 | 105 | 17 | 26 |
| Lake ... ... ... | 11 | 7,380 | 23,885 | 9 | 2,894 | 17,924 | 2,932 | 2,701 | 231 | 319 | 2,825 | 152 | 28 | 39 |
| Northern ... ... ... | 6 | 5,729 | 26,167 | 5 | 3,185 | 38,665 | 3,839 | 3,373 | 927 | 360 | 3,857 | 202 | 21 | 69 |
| Southern ... ... ... | 8 | 2,636 | 13,094 | 8 | 2,773 | 26,425 | 1,378 | 1,217 | 153 | 67 | 1,290 | 73 | 12 | 33 |
| Southern Highlands ... | 5 | 5,880 | 29,635 | 5 | 3,830 | 47,525 | 2,330 | 2,011 | 317 | 83 | 2,212 | 175 | 22 | 39 |
| Tanga ... ... ... | 12 | 5,905 | 26,720 | 11 | 4,359 | 51,633 | 1,840 | 1,687 | 153 | 258 | 1,800 | 122 | 15 | 62 |
| Western ... ... ... | 8 | 6,309 | 25,197 | 6 | 3,686 | 21,039 | 4,288 | 3,715 | 573 | 88 | 4,185 | 129 | 26 | 81 |
| West Lake ... ... ... | 2 | 1,801 | 7,553 | 2 | 953 | 7,065 | 687 | 491 | 196 | 62 | 658 | 41 | 2 | 22 |
| Dar es Salaam ... ... | 5 | 2,596 | 39,842 | 4 | 6,036 | 32,103 | 5,664 | 3,425 | 2,239 | 37 | 5,581 | 225 | 22 | 136 |
| Total Government Services | 70 | 45,268 | 218,812 | 61 | 32,091 | 273,245 | 26,405 | 21,467 | 5,383 | 1,608 | 25,730 | 1,269 | 180 | 520 |
| | | | | | B. Missions | | | | | | | | | |
| Central ... ... ... | 13 | 4,521 | 13,539 | 7 | 1,275 | 5,195 | 2,293 | 1,834 | 459 | 171 | 2,198 | 95 | 8 | 47 |
| Eastern ... ... ... | 5 | 791 | 7,352 | 5 | 899 | 4,172 | 1,485 | 1,501 | 184 | 76 | 1,663 | 42 | 3 | 45 |
| Lake ... ... ... | 12 | 12,611 | 32,866 | 16 | 6,373 | 17,166 | 2,727 | 1,992 | 1,085 | 342 | 2,916 | 192 | 25 | 160 |
| Northern ... ... ... | 9 | 5,091 | 11,211 | 5 | 2,353 | 8,817 | 2,262 | 1,916 | 346 | 111 | 2,204 | 61 | 4 | 29 |
| Southern ... ... ... | 37 | 12,062 | 43,929 | 36 | 9,137 | 53,000 | 7,247 | 6,051 | 463 | 293 | 6,916 | 332 | 45 | 133 |
| Southern Highlands ... | 10 | 3,637 | 12,236 | 6 | 1,575 | 11,169 | 2,163 | 1,584 | 573 | 162 | 1,970 | 98 | 8 | 58 |
| Tanga ... ... ... | 15 | 11,731 | 41,342 | 12 | 7,857 | 48,467 | 2,687 | 2,062 | 625 | 148 | 2,612 | 126 | 15 | 66 |
| Western ... ... ... | 20 | 9,120 | 32,000 | 19 | 8,672 | 62,640 | 3,626 | 3,083 | 543 | 241 | 3,432 | 128 | 12 | 116 |
| West Lake ... ... ... | 11 | 4,912 | 9,877 | 10 | 3,342 | 7,949 | 990 | 669 | 321 | 161 | 954 | 61 | 7 | 15 |
| Total Mission Services ... | 132 | 64,476 | 204,352 | 116 | 41,483 | 218,575 | 25,480 | 20,692 | 4,599 | 1,464 | 24,865 | 1,074 | 127 | 669 |
| | | | | | C. Native Authority Services | | | | | | | | | |
| Central ... ... ... | 50 | 10,913 | 48,813 | 50 | 8,514 | 42,333 | 5,102 | 4,812 | 288 | 227 | 488 | 114 | 7 | 64 |
| Eastern ... ... ... | 7 | 1,492 | 5,070 | 7 | 2,070 | 7,282 | 150 | 144 | 6 | 1 | 139 | 6 | 1 | 11 |
| Lake ... ... ... | 36 | 20,879 | 53,670 | 30 | 9,918 | 39,141 | 4,792 | 4,574 | 59 | 174 | 4,751 | 96 | 14 | 88 |
| Northern ... ... ... | 18 | 7,624 | 28,956 | 18 | 5,294 | 34,706 | 4,303 | 3,913 | 79 | 86 | 3,787 | 50 | 6 | 17 |
| Southern ... ... ... | 22 | 5,354 | 43,646 | 21 | 8,540 | 70,807 | 1,929 | 1,787 | 139 | 45 | 1,838 | 74 | 9 | 16 |
| Southern Highlands ... | 8 | 4,031 | 15,856 | 8 | 2,213 | 15,557 | 765 | 731 | 34 | 12 | 716 | 19 | 2 | 5 |
| Tanga ... ... ... | 26 | 8,755 | 35,604 | 22 | 4,444 | 17,298 | 2,723 | 2,671 | 48 | 31 | 2,712 | 32 | 1 | 23 |
| Western ... ... ... | 22 | 8,152 | 25,161 | 19 | 5,481 | 22,543 | 3,574 | 7,378 | 196 | 93 | 3,211 | 74 | 54 | 50 |
| West Lake ... ... ... | 6 | 6,442 | 21,251 | 6 | 3,627 | 10,766 | 2,055 | 1,660 | 395 | 109 | 2,045 | 59 | – | 29 |
| Total Native Authority Services ... | 195 | 72,642 | 278,027 | 181 | 50,101 | 260,433 | 25,393 | 27,470 | 1,244 | 778 | 19,687 | 524 | 94 | 303 |
| TERRITORIAL TOTALS ... | 397 | 182,386 | 701,191 | 358 | 123,675 | 752,253 | 77,278 | 69,629 | 11,226 | 3,850 | 70,282 | 2,867 | 401 | 1,492 |

## TABLE VIIA

### LEPROSARIA (IN-PATIENTS)—GOVERNMENT, LOCAL AUTHORITY AND VOLUNTARY AGENCY

| PROVINCE | No. of Leprosaria | Leprosy Patients admitted during 1962 | Discharged | Absconded | Births | Deaths from Leprosy | Deaths from other causes | Leprosy patients resident at 31st December, 1962 | | | | Clinical Classification active cases | | | Cases on Sulphone Therapy | | | | Burnt-out Cases | | Non-Lepromatous persons resident at 31st Dec. 1962 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Men | Women | Children | Total | Lepromatous | Tuberculoid | Mixed | Men | Women | Children | Total | Without deformity | With deformity | Adults | Children | Total |
| Central ... ... | 2 | 196 | 125 | 58 | 28 | 9 | 8 | 366 | 228 | 51 | 645 | 429 | 66 | 150 | 301 | 202 | 46 | 549 | – | 5 | 27 | 33 | 60 |
| Eastern ... ... | 3 | 19 | 20 | 9 | 3 | 2 | 8 | 171 | 119 | 22 | 312 | 90 | 182 | 42 | 157 | 95 | 12 | 264 | 8 | 6 | 7 | 21 | 28 |
| Lake ... ... | 2 | 258 | 115 | 50 | 25 | 3 | 2 | 445 | 260 | 82 | 787 | 340 | 302 | 123 | 444 | 258 | 82 | 784 | 1 | 4 | 58 | 50 | 108 |
| Northern ... | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Southern ... | 3 | 468 | 264 | 127 | 73 | 5 | 15 | 646 | 401 | 208 | 1,255 | 391 | 808 | 28 | 573 | 373 | 208 | 1,154 | 30 | 62 | 439 | 142 | 581 |
| S. Highlands ... | 1 | 187 | 57 | 91 | 8 | – | 2 | 279 | 164 | 55 | 498 | 210 | 203 | 85 | 279 | 164 | 55 | 498 | – | 3 | 3 | 25 | 28 |
| Tanga ... ... | 3 | 53 | 34 | 9 | 1 | 8 | 3 | 107 | 28 | 4 | 139 | 69 | 18 | 24 | 74 | 19 | 2 | 95 | 45 | 19 | 3 | 2 | 5 |
| Western ... | 1 | 2 | 2 | – | 1 | – | – | 13 | 4 | – | 17 | 1 | 12 | 4 | 11 | 4 | – | 15 | – | 2 | 2 | 5 | 7 |
| West Lake ... | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Dar es Salaam ... | 1 | 61 | 51 | – | – | – | 3 | 6 | 1 | – | 7 | 29 | 19 | 13 | 49 | 4 | 1 | 54 | 1 | 6 | – | – | – |
| Totals ... | 16 | 1,244 | 668 | 344 | 139 | 27 | 41 | 2,033 | 1,205 | 422 | 3,660 | 1,559 | 1,610 | 469 | 1,888 | 1,119 | 406 | 3,413 | 85 | 107 | 539 | 278 | 817 |

## TABLE VIIB

### LEPROSY OUT-PATIENT CLINICS

(Including Government, Local Authority and Voluntary Ageney Clinics)

| PROVINCE | Total Cases under Treatment 1962 | | | | | New Cases under Treatment 1962 | | | | Cases under Sulphone Treatment | | | Cases atte-nding regu-larly | Cases not atte-nding regu-larly | Cases dis-conti-nued treat-ment Dis-eases Active | Cases Discharged Clinically Cured | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Clinics | Lepro-matous | Tuber-culoid | Indeter-minate | Total | Lepro-matous | Tuber-culoid | Indeter-minate | Total | Adults | Child-ren under 16 | Total | | | | Adults | Child-ren | Total |
| Central ... ... ... ... | 40 | 417 | 1,571 | 576 | 2,564 | 124 | 434 | 153 | 711 | 2,356 | 208 | 2,564 | 2,225 | 339 | 134 | 140 | 14 | 154 |
| Eastern ... ... ... ... | 48 | 985 | 3,090 | 1,079 | 5,144 | 272 | 646 | 338 | 1,256 | 4,484 | 681 | 5,206 | 3,362 | 1,631 | 516 | 104 | 3 | 107 |
| Lake ... ... ... ... | 101 | 1,966 | 1,426 | 1,228 | 4,620 | 1,325 | 340 | 515 | 2,180 | 4,067 | 499 | 4,566 | 2,486 | 1,665 | 227 | 49 | 28 | 77 |
| Northern ... ... ... ... | 1 | 9 | 41 | 35 | 85 | 1 | 13 | 9 | 23 | 76 | 9 | 85 | 62 | 23 | – | – | – | – |
| Southern ... ... ... ... | 36 | 1,369 | 4,271 | 382 | 8,083 | 199 | 1,058 | 168 | 2,061 | 7,291 | 472 | 7,753 | 6,277 | 1,628 | 755 | 339 | 27 | 407 |
| S. Highlands ... ... ... | 18 | 74 | 1,038 | 214 | 1,326 | 4 | 212 | 22 | 238 | 1,066 | 259 | 1,325 | 1,289 | 240 | 1 | 247 | 51 | 298 |
| Tanga ... ... ... ... | 154 | 599 | 1,655 | 800 | 3,054 | 180 | 422 | 250 | 852 | 2,622 | 369 | 2,991 | 1,537 | 892 | 522 | 33 | 6 | 39 |
| Western ... ... ... ... | 4 | 29 | 443 | 43 | 509 | 4 | 57 | 13 | 73 | 484 | 25 | 509 | 404 | 95 | 81 | 1 | – | 1 |
| West Lake ... ... ... ... | 72 | 245 | 1,734 | 311 | 2,290 | 90 | 1,026 | 113 | 1,229 | 2,084 | 206 | 2,290 | 1,611 | 679 | 35 | – | – | – |
| Dar es Salaam ... ... ... | 1 | 120 | 388 | 106 | 614 | 40 | 176 | 57 | 273 | 568 | 36 | 604 | 524 | 90 | 34 | – | – | – |
| Totals ... | 475 | 5,813 | 15,657 | 4,774 | 28,289 | 2,239 | 3,484 | 1,638 | 8,896 | 25,098 | 2,764 | 27,893 | 19,777 | 7,282 | 2,305 | 913 | 129 | 1,083 |

## TABLE VIII

## LOCAL AUTHORITY MEDICAL SERVICES

| PROVINCE | No. of Rural Health Centres | Number of Dispensaries |  | M.A. | R.M.A. | Dresser | Beds | New Cases |  |  | Total Attendances |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | Grade A | Grade B |  |  |  |  | Male | Female | Total | Male | Female | Total |
| Central ... ... | 7 | 25 | 49 | 6 | 29 | 72 | 297 | 421,775 | 443,729 | 865,504 | 810,246 | 949,148 | 1,759,394 |
| Eastern ... ... | 2 | 30 | 67 | 2 | 29 | 121 | 30 | 412,861 | 383,963 | 796,824 | 625,345 | 628,120 | 1,253,465 |
| Lake ... ... | 10 | 82 | 65 | 14 | 86 | 140 | 805 | 890,047 | 1,030,531 | 1,920,578 | 1,831,506 | 1,813,194 | 3,644,700 |
| Northern ... | 3 | 39 | 15 | 7 | 40 | 95 | 113 | 950,199 | 523,336 | 1,473,535 | 812,209 | 789,992 | 1,602,201 |
| Southern ... | 2 | 27 | 42 | 4 | 28 | 68 | 123 | 305,373 | 292,428 | 597,801 | 598,544 | 638,964 | 1,237,508 |
| S. Highlands ... | 1 | 62 | 23 | 1 | 73 | 15 | 20 | 337,422 | 338,639 | 676,061 | 610,794 | 689,237 | 1,300,031 |
| Tanga ... ... | – | 46 | 17 | – | 48 | 27 | 40 | 184,981 | 178,238 | 363,219 | 339,275 | 350,702 | 689,977 |
| Western ... | 2 | 29 | 72 | 2 | 33 | 106 | 206 | 478,454 | 526,182 | 1,004,636 | 1,354,154 | 1,549,438 | 2,903,592 |
| West Lake ... | 1 | 28 | 23 | 1 | 34 | 44 | 213 | 238,990 | 240,945 | 479.935 | 364,775 | 359,004 | 723,779 |
| Total ... | 28 | 368 | 373 | 37 | 400 | 688 | 1,847 | 4,220,102 | 3,957,991 | 8,178,093 | 7,346,848 | 7,767,799 | 15,114,647 |

## TABLE IXA

## VOLUNTARY AGENCY HOSPITALS WITH RESIDENT MEDICAL PRACTITIONERS

As at 31st December, 1962

| Province and Voluntary Agency | Hospital | Number of Beds |
|---|---|---|
| *Central:* | | |
| Augustana Lutheran ... ... ... ... | Iambi ... ... ... ... | 50 |
| Augustana Lutheran ... ... ... ... | Kiomboi ... ... ... | 108 |
| Church Missionary Society ... ... ... | Kilimatinde ... ... ... | 84 |
| Church Missionary Society ... ... ... | Mvumi ... ... ... | 108 |
| Medical Missionaries of Mary ... ... ... | Makiungu ... ... ... | 65 |
| *Eastern:* | | |
| Church Missionary Society ... ... ... | Berega... ... ... ... | 50 |
| Danish Lutheran ... ... ... ... ... | Lugala... ... ... ... | 40 |
| Swiss Capuchin ... ... ... ... ... | Ifakara ... ... ... | 180 |
| *Lake:* | | |
| Africa Inland ... ... ... ... ... | Kola Ndoto ... ... ... | 99 |
| Africa Inland ... ... ... ... ... | Kola Ndoto (Leprosarium)... | 59 |
| Maryknoll ... ... ... ... ... ... | Kowak ... ... ... | 40 |
| Mennonite ... ... ... ... ... ... | Shirati ... ... ... | 102 |
| Roman Catholic ... ... ... ... ... | Sengerema ... ... ... | 160 |
| White Fathers ... ... ... ... ... | Kagunguli ... ... ... | 125 |
| White Fathers ... ... ... ... ... | Sumve ... ... ... | 208 |
| Roman Catholic ... ... ... ... ... | Bukumbi ... ... ... | 165 |
| *Northern:* | | |
| Lutheran ... ... ... ... ... ... | Machame ... ... ... | 110 |
| Lutheran ... ... ... ... ... ... | Nkoaranga ... ... ... | 60 |
| Medical Missionaries of Mary ... ... ... | Ndareda ... ... ... | 81 |
| Norwegian Lutheran ... ... ... ... | Haydom ... ... ... | 53 |
| *Southern:* | | |
| Universities Mission to Central Africa ... ... | Lulindi ... ... ... | 132 |
| Universities Mission to Central Africa ... ... | Liuli ... ... ... ... | 46 |
| Universities Mission to Central Africa ... ... | Mkomaindo ... ... ... | 104 |
| Benedictine... ... ... ... ... ... | Peramiho ... ... ... | 241 |
| Benedictine... ... ... ... ... ... | Litembo ... ... ... | 134 |
| Benedictine... ... ... ... ... ... | Ndanda ... ... ... | 225 |
| Benedictine... ... ... ... ... ... | Nyangao ... ... ... | 82 |
| Benedictine ... ... ... ... ... ... | Mnero ... ... ... | 85 |
| Christian Mission in Many Lands ... ... | Mbesa ... ... ... | 82 |
| *Southern Highlands:* | | |
| Swedish Evangelical ... ... ... ... | Ilembula ... ... ... | 130 |
| Benedictine... ... ... ... ... ... | Lugarawa ... ... ... | 150 |
| Consolata Fathers... ... ... ... ... | Tosamaganga... ... ... | 60 |
| Consolata Fathers... ... ... ... ... | Ulete ... ... ... ... | 39 |
| *Tanga:* | | |
| Lutheran, Usambara ... ... ... ... | Bumbuli ... ... ... | 144 |
| Universities Mission to Central Africa ... ... | Kideleko ... ... ... | 68 |
| Universities Mission to Central Africa ... ... | Magila... ... ... ... | 143 |
| *Western:* | | |
| Medical Missionaries of Mary ... ... ... | Kabanga ... ... ... | 75 |
| Moravian ... ... ... ... ... ... | Sikonge ... ... ... | 136 |
| Seventh Day Adventist ... ... ... ... | Heri ... ... ... ... | 70 |
| Swedish Free ... ... ... ... ... | Nkinga ... ... ... | 65 |
| *West Lake:* | | |
| Church Missionary Society ... ... ... | Murgwanza ... ... ... | 60 |
| Church of Sweden ... ... ... ... | Ndolage ... ... ... | 120 |
| Church of Sweden ... ... ... ... | Nyakahanga ... ... ... | 60 |
| White Fathers ... ... ... ... ... | Kagondo ... ... ... | 175 |
| White Fathers ... ... ... ... ... | Rubya ... ... ... | 60 |
| White Fathers ... ... ... ... ... | Rulenge ... ... ... | 60 |
| TOTAL ... | 45 | 4,693 |

## TABLE IXB

## VOLUNTARY AGENCY MEDICAL SERVICES

| PROVINCE | Number of Hospitals and Dispensaries | Beds | In-Patient Admissions | Out-Patients | |
|---|---|---|---|---|---|
| | | | | New Cases | Total Attendances |
| | | I.—HOSPITALS WITH DOCTORS | | | |
| CENTRAL ... ... ... ... ... | 4 | 300 | 9,446 | 31,801 | 94,560 |
| EASTERN ... ... ... ... ... | 3 | 270 | 5,272 | 37,406 | 135,078 |
| LAKE ... ... ... ... ... | 7 | 793 | 12,899 | 66,254 | 198,527 |
| NORTHERN ... ... ... ... | 4 | 304 | 7,225 | 33,492 | 72,616 |
| SOUTHERN ... ... ... ... | 8 | 1,094 | 15,229 | 81,983 | 521,395 |
| SOUTHERN HIGHLANDS ... ... ... | 5 | 429 | 12,482 | 31,222 | 122,415 |
| TANGA ... ... ... ... ... | 3 | 355 | 7,137 | 22,598 | 109,245 |
| WESTERN ... ... ... ... ... | 5 | 346 | 6,049 | 43,198 | 106,650 |
| WEST LAKE ... ... ... ... | 6 | 607 | 10,578 | 44,664 | 84,071 |
| TOTALS—HOSPITALS ... ... ... | 45 | 4,498 | 86,317 | 392,618 | 1,444,557 |
| | II.—DISPENSARIES WITH OVER TWENTY BEDS | | | | |
| CENTRAL ... ... ... ... ... | 1 | 50 | 1,465 | 7,029 | 22,475 |
| EASTERN ... ... ... ... ... | 6 | 162 | 2,104 | 43,603 | 195,536 |
| LAKE ... ... ... ... ... | 1 | 30 | 812 | 9,771 | 11,360 |
| NORTHERN ... ... ... ... | 4 | 141 | 6,263 | 24,498 | 61,320 |
| SOUTHERN ... ... ... ... | 19 | 993 | 17,333 | 198,268 | 835,127 |
| SOUTHERN HIGHLANDS ... ... ... | 10 | 432 | 10,012 | 53,753 | 212,623 |
| TANGA ... ... ... ... ... | 7 | 397 | 6,725 | 38,707 | 112,534 |
| WESTERN ... ... ... ... ... | 8 | 345 | 4,379 | 54,976 | 195,852 |
| WEST LAKE ... ... ... ... | 4 | 36 | 1,735 | 14,266 | 2,970 |
| TOTALS—Dispensaries with over Twenty Beds ... | 60 | 2,586 | 50,828 | 434,871 | 1,649,797 |
| | | III.—OTHER DISPENSARIES AND CLINICS | | | |
| CENTRAL ... ... ... ... ... | 13 | 185 | 4,167 | 34,793 | 112,276 |
| EASTERN ... ... ... ... ... | 20 | 33 | 303 | 64,776 | 226,081 |
| LAKE ... ... ... ... ... | 7 | 64 | 553 | 26,222 | 109,078 |
| NORTHERN ... ... ... ... | 4 | 43 | 1,830 | 18,284 | 35,328 |
| SOUTHERN ... ... ... ... | 25 | 119 | 14,846 | 147,385 | 443,480 |
| SOUTHERN HIGHLANDS ... ... ... | 27 | 78 | 949 | 164,790 | 343,804 |
| TANGA ... ... ... ... ... | 11 | 87 | 1,892 | 61,403 | 150,343 |
| WESTERN ... ... ... ... ... | 28 | 60 | 1,021 | 140,334 | 304,250 |
| WEST LAKE ... ... ... ... | 5 | 194 | 5,040 | 28,965 | 57,115 |
| TOTALS—Other Dispensaries and Clinics ... | 140 | 863 | 30,591 | 686,952 | 1,781,755 |
| TERRITORIAL TOTALS ... ... ... | 245 | 7,947 | 167,736 | 1,514,441 | 4,876,109 |

# PART IV

# Morbidity and Mortality

# MORBIDITY AND MORTALITY EXPERIENCE

Diseases occurring in the main hospitals in Tanganyika are listed in accordance with the International Statistical Classification of Diseases and Causes of Death, and the statistics from which conclusions concerning morbidity and mortality are drawn are based upon returns of diseases submitted by those government and voluntary agency hospitals which have resident doctors. Table X shows the analysis of statistics in respect of in-patients treated in those hospitals, and Table XI gives similar details regarding out-patients. The morbidity and mortality resulting from each of the disease groups are set out diagramatically in Figure I, and are expressed as a percentage of the total in-patient admissions and out-patient attendances as recorded in Tables X and XI. Figure II shows a more detailed analysis of the Infective and Parasitic Diseases which form the largest disease group.

The total number of diseases diagnosed in patients attending those hospitals both a in-patients and out-patients in 1962 was 2,590,261, an increase of 108,206 or 4 per cent on the 1961 total. The number of deaths in hospital in 1962 was 6,858, an increase of 565 since the previous year. The percentage death rate expressed in terms of total number of diseases diagnosed in hospitalized patients was 2.5 in 1961 and 2.65 in 1962.

The morbidity shown as a percentage of the total diseases diagnosed shows a very similar pattern to previous years.

Comparing Figure I showing morbidity as percentage of total cases and mortality as percentage of total deaths with Figure I for 1961, it is apparent that there has been little change. Figure II for 1962 also resembles the picture shown in the previous year. It is, however, noteworthy that although there is a decrease in the overall incidence of respiratory diseases, pneumonia as a specific diagnosis has increased. The considerable increase in morbidity in Group XI is accounted for by the inclusion in 1962 within this category of normal deliveries, and there is a corresponding fall in mortality.

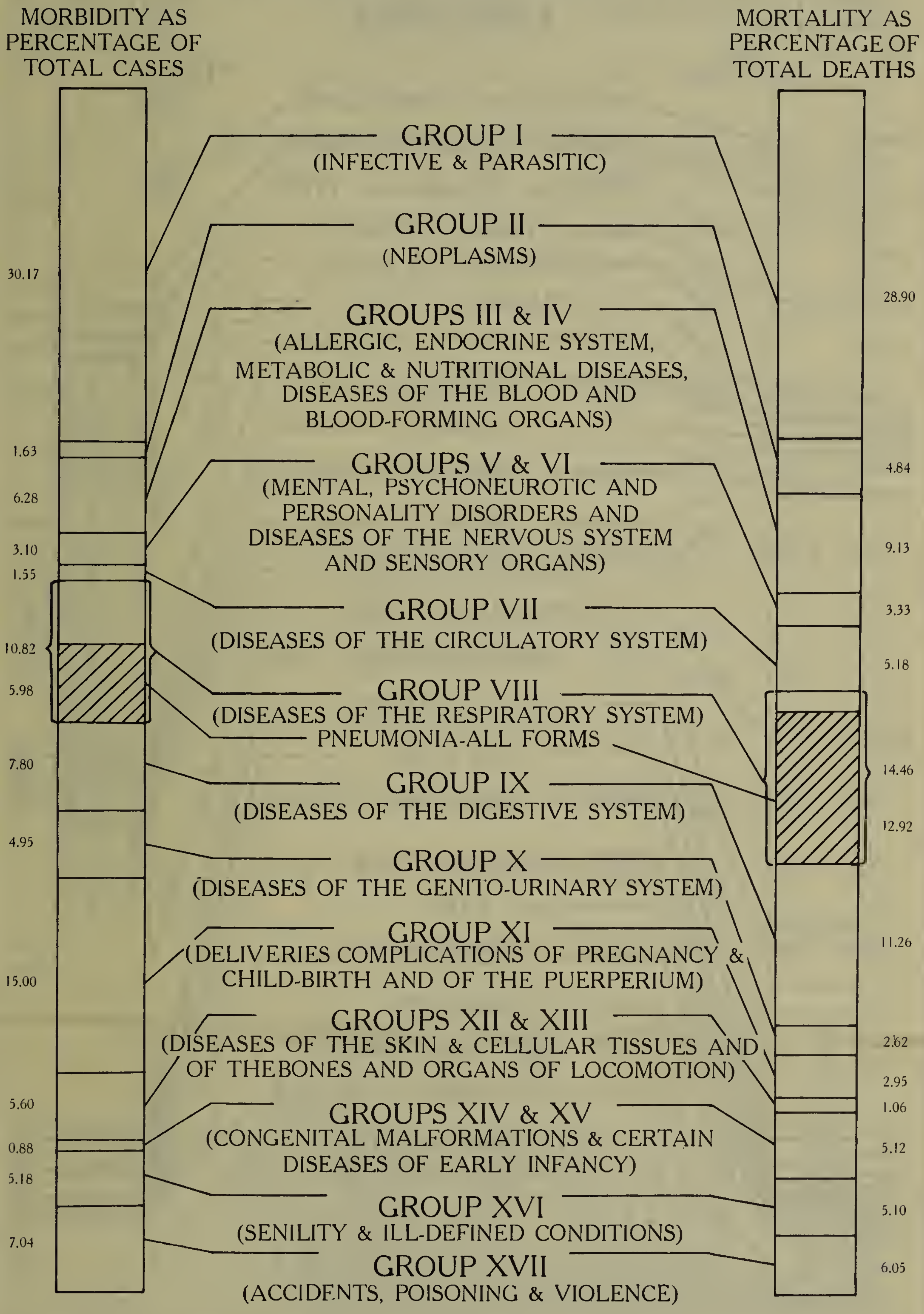
The most common causes of hospital deaths during 1962 were as follows:

| | |
|---|---|
| Pneumonia (all forms) ... ... ... ... ... | 886 |
| Malaria (all forms) ... ... ... ... ... | 507 |
| Accidents ... ... ... ... ... ... ... | 415 |
| Tuberculosis (all forms) ... ... ... ... ... | 395 |
| Diseases of the Hearth ... ... ... ... ... | 309 |
| Gastro-enteritis (all ages)... ... ... ... ... | 307 |
| Tetanus ... ... ... ... ... ... ... | 306 |
| Defective Nutrition ... ... ... ... ... | 273 |
| Meningitis (all forms) ... ... ... ... ... | 273 |
| Complications of pregnancy and childbirth ... ... | 202 |

This list shows little change from that of the previous year, although there is some increase in mortality attributable to diseases of the heart and a decrease from gastro-enteritis.

FIGURE I

# ALL DISEASES



Printed by the Survey Division, Ministry of Lands, Settlement and Water, DSM. 1964.

## TABLE X—(*contd.*)

## DISEASES

### In-Patients—Government and Voluntary Agency Hospitals

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| Diseases | Government Hospitals | | | | | | Voluntary Agency Hospitals | | | | | | Territorial Total Cases | Territorial Total Deaths | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | | | Deaths | | | Cases | | | Deaths | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| Measles | 831 | 840 | 1,671 | 7 | 3 | 10 | 516 | 562 | 1,078 | 5 | 4 | 9 | 2,749 | 19 | 1·014 | 0·277 |
| Yellow fever | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Infectious hepatitis | 411 | 164 | 575 | 32 | 15 | 47 | 98 | 99 | 197 | 3 | 6 | 9 | 772 | 56 | 0·285 | 0·817 |
| Rabies | 12 | 10 | 22 | 1 | – | 1 | 3 | 3 | 6 | – | – | – | 28 | 1 | 0·010 | 0·015 |
| Louse-borne epidemic typhus | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Flea-borne endemic typhus | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Tick-borne typhus | – | 1 | 1 | – | – | – | – | 1 | 1 | – | – | – | 2 | – | – | – |
| Mite-borne typhus | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Typhus unspecified and other rickettsial diseases | 3 | 1 | 4 | – | – | – | 2 | 4 | 6 | – | – | – | 10 | – | 0·003 | – |
| Vivax Malaria (benign tertian) | 533 | 527 | 1,060 | 10 | 8 | 18 | 281 | 296 | 577 | 23 | 5 | 28 | 1,637 | 46 | 0·604 | 0·671 |
| Malariae malaria (quartan) | 29 | 42 | 71 | 1 | – | 1 | 220 | 245 | 465 | – | – | – | 536 | 1 | 0·198 | 0·015 |
| Falciparum Malaria (Malignant tertian) | 3,960 | 2,637 | 6,597 | 75 | 45 | 120 | 3,193 | 4,244 | 7,437 | 51 | 60 | 111 | 14,054 | 231 | 5·185 | 3·318 |
| Blackwater Fever | 33 | – | 33 | 1 | 2 | 3 | 2 | 6 | 8 | 3 | – | 3 | 41 | 6 | 0·015 | 0·087 |
| Other and unspecified forms of Malaria | 3,983 | 3,600 | 7,583 | 74 | 58 | 132 | 2,045 | 2,657 | 4,702 | 49 | 42 | 91 | 12,285 | 223 | 4·533 | 3·252 |
| Schistosomiasis vesical (S. haem) | 657 | 381 | 1,038 | 2 | 1 | 3 | 1,418 | 1,120 | 2,538 | 3 | – | 3 | 3,576 | 6 | 1·319 | 0·087 |
| Schistosomiasis intestinal (S. mansoni) | 76 | 93 | 169 | 1 | 1 | 2 | 152 | 121 | 273 | – | – | – | 442 | 2 | 0·163 | 0·029 |
| Schistosomiasis pulmonary (S. japonicum) | 2 | 2 | 4 | – | – | – | – | – | – | 1 | – | 1 | 4 | 1 | 0·001 | 0·015 |
| Schistosomiasis other and unspecified | 13 | 2 | 15 | – | – | – | 26 | 27 | 53 | – | – | – | 68 | – | 0·025 | – |
| Hydatid disease | 6 | 4 | 10 | – | – | – | 17 | 10 | 27 | – | – | – | 37 | – | 0·014 | – |
| Filariasis (bancrofti) | 145 | 22 | 167 | – | – | – | 107 | 35 | 142 | 5 | – | 5 | 309 | 5 | 0·114 | 0·073 |
| Onchocerciasis | 15 | – | 15 | – | – | – | 6 | – | 6 | – | – | – | 21 | – | 0·008 | – |
| Other filariasis | 36 | 31 | 67 | 2 | – | 2 | 63 | 23 | 86 | – | – | – | 153 | 2 | 0·056 | 0·029 |
| Ankylostosomiasis | 2,229 | 1,875 | 4,104 | 15 | 3 | 18 | 2,362 | 3,049 | 5,411 | 2 | 1 | 3 | 9,515 | 21 | 3·511 | 0·306 |
| Tapeworm and other cestode infestations | 284 | 161 | 445 | – | 1 | 1 | 329 | 537 | 866 | 3 | 3 | 6 | 1,311 | 7 | 0·484 | 0·102 |
| Ascariasis | 772 | 605 | 1,377 | – | – | – | 965 | 1,409 | 2,374 | 2 | 1 | 3 | 3,751 | 3 | 1·384 | 0·044 |
| Guinea worm (dracunculosis) | 1 | 2 | 3 | – | – | – | 3 | 53 | 56 | – | – | – | 59 | – | 0·022 | – |
| Other diseases due to helminths | 218 | 114 | 332 | 1 | – | 1 | 202 | 222 | 424 | 1 | – | 1 | 756 | 2 | 0·279 | 0·029 |
| Lymphogranuloma venereum | 18 | 6 | 24 | 1 | 1 | 2 | 8 | 12 | 20 | 1 | – | 1 | 44 | 3 | 0·016 | 0·044 |
| Granuloma inguinale, venereal | 4 | 7 | 11 | – | – | – | 1 | 4 | 5 | – | – | – | 16 | – | 0·006 | – |
| Chancroid and other unspecified venereal diseases | 56 | 23 | 79 | – | – | – | 1 | 6 | 7 | – | – | – | 86 | – | 0·032 | – |
| Food poisoning infection and intoxication | 151 | 116 | 267 | 5 | 3 | 8 | 31 | 33 | 64 | 2 | 6 | 8 | 331 | 16 | 0·122 | 0·233 |
| Relapsing fever, louse-borne | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Relapsing fever, tick-borne | 174 | 132 | 306 | 1 | 1 | 2 | 254 | 236 | 490 | 12 | 11 | 23 | 796 | 25 | 0·293 | 0·364 |
| Leptospirosis icterohaemorrhagica (Weil's disease) | – | – | – | – | – | – | 5 | 2 | 7 | – | – | – | 7 | – | 0·002 | – |
| Yaws | 42 | 34 | 76 | – | – | – | 54 | 45 | 99 | – | – | – | 175 | – | 0·065 | – |
| Chickenpox | 182 | 133 | 315 | 2 | – | 2 | 75 | 59 | 134 | – | – | – | 449 | 2 | 0·166 | 0·029 |
| Mumps | 256 | 206 | 462 | – | – | – | 49 | 29 | 78 | 1 | – | 1 | 540 | 1 | 0·199 | 0·015 |
| Dengue | – | – | – | – | – | – | 15 | 12 | 27 | 1 | – | 1 | 27 | 1 | 0·010 | 0·015 |
| Trachoma | 74 | 36 | 110 | – | – | – | 125 | 146 | 271 | – | – | – | 381 | – | 0·141 | – |
| Sandfly fever | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Leishmaniasis | 6 | 2 | 8 | – | – | – | 1 | – | 1 | 1 | – | 1 | 9 | 1 | 0·003 | 0·015 |

## TABLE X—(*contd.*)

## DISEASES

### IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | | | | VOLUNTARY AGENCY HOSPITALS | | | | | | TERRITORIAL TOTAL CASES | TERRITORIAL TOTAL DEATHS | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CASES | | | DEATHS | | | CASES | | | DEATHS | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| Trypanosomiasis gambiensis ... ... | 27 | 3 | 30 | 4 | 1 | 5 | 7 | 4 | 11 | 1 | 1 | 2 | 41 | 7 | 0·018 | 0·102 |
| Trypanosomiasis rhodesiensis ... ... | 23 | 23 | 46 | 3 | 1 | 4 | 20 | 9 | 29 | 2 | – | 2 | 75 | 6 | 0·028 | 0·087 |
| Trypanosomiasis Other and unspecified ... | 32 | 2 | 34 | 1 | – | 1 | 7 | 1 | 8 | – | – | – | 42 | 1 | 0·015 | 0·015 |
| Dermatophytosis ... ... ... ... | 54 | 8 | 62 | – | – | – | 46 | 19 | 65 | – | – | – | 127 | – | 0·047 | – |
| Scabies ... ... ... ... ... | 362 | 240 | 602 | – | – | – | 284 | 343 | 627 | 1 | – | 1 | 1,229 | 1 | 0·453 | 0·015 |
| All other diseases classified as infective and parasitic ... ... ... ... ... | 288 | 242 | 530 | 7 | – | 7 | 371 | 409 | 780 | 11 | – | 11 | 1,310 | 17 | 0·483 | 0·248 |
| | | | | | | | | | | | | | 81,765 | 1,982 | 30·171 | 28·900 |
| **GROUP II** | | | | | | | | | | | | | | | | |
| *Neoplasms* | | | | | | | | | | | | | | | | |
| Malignant neoplasm of buccal cavity and pharynx ... ... ... ... ... | 17 | 14 | 31 | 3 | 1 | 4 | 16 | 11 | 27 | 1 | 1 | 2 | 58 | 6 | 0·021 | 0·087 |
| Malignant neoplasm of œsophagus ... | 15 | 3 | 18 | 4 | – | 4 | 11 | 4 | 15 | 4 | – | 4 | 33 | 8 | 0·012 | 0·117 |
| Malignant neoplasm of stomach ... ... | 40 | 14 | 54 | 9 | 4 | 13 | 42 | 23 | 65 | 8 | 3 | 11 | 119 | 24 | 0·044 | 0·350 |
| Malignant neoplasm of intestine, except rectum ... ... ... ... ... | 37 | 8 | 45 | 4 | 2 | 6 | 17 | 23 | 40 | 8 | 1 | 9 | 85 | 15 | 0·031 | 0·219 |
| Malignant neoplasm of rectum ... ... | 8 | 6 | 14 | 1 | – | 1 | 11 | 9 | 20 | – | 1 | 1 | 34 | 2 | 0·013 | 0·029 |
| Malignant neoplasm of larynx ... ... | 3 | 1 | 4 | – | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 4 | 7 | 5 | 0·003 | 0·073 |
| Malignant neoplasm of trachea and of bronchus and lung not specified as secondary ... ... ... ... ... | 15 | 11 | 26 | 2 | 2 | 4 | 7 | 5 | 12 | 1 | – | 1 | 38 | 5 | 0·014 | 0·073 |
| Malignant neoplasm of breast ... ... | 7 | 42 | 49 | – | 6 | 6 | 10 | 26 | 36 | – | 2 | 2 | 85 | 8 | 0·031 | 0·117 |
| Malignant neoplasm of cervix uteri ... | – | 128 | 128 | – | 4 | 4 | – | 141 | 141 | – | 10 | 10 | 269 | 14 | 0·099 | 0·204 |
| Malignant neoplasm of other and unspecified parts of uterus ... ... ... | – | 113 | 113 | – | 9 | 9 | – | 84 | 84 | – | 2 | 2 | 197 | 11 | 0·073 | 0·160 |
| Malignant neoplasm of prostate ... ... | 77 | – | 77 | 9 | – | 9 | 66 | – | 66 | 6 | – | 6 | 143 | 15 | 0·053 | 0·219 |
| Malignant neoplasm of skin ... ... | 54 | 40 | 94 | 3 | 1 | 4 | 21 | 21 | 42 | – | 1 | 1 | 136 | 5 | 0·050 | 0·073 |
| Malignant neoplasm of bone and connective tissue ... ... ... ... ... | 60 | 45 | 105 | 1 | 3 | 4 | 43 | 41 | 84 | 4 | 3 | 7 | 189 | 11 | 0·070 | 0·160 |
| (a) Malignant neoplasm of liver and biliary passages ... ... ... ... | 228 | 73 | 301 | 38 | 12 | 50 | 55 | 65 | 120 | 17 | 9 | 26 | 421 | 76 | 0·155 | 1·108 |
| (b) Malignant neoplasm of all other and unspecified sites ... ... ... ... | 158 | 141 | 299 | 16 | 8 | 24 | 91 | 106 | 197 | 19 | 4 | 23 | 496 | 47 | 0·183 | 0·685 |
| Leukaemia and aleukaemia ... ... | 20 | 19 | 39 | 4 | – | 4 | 11 | 11 | 22 | 5 | 3 | 8 | 61 | 12 | 0·022 | 0·175 |
| Lymphosarcoma and other neoplasms of lymphatic and haematopoietic system ... | 31 | 23 | 54 | 5 | 2 | 7 | 29 | 21 | 50 | 1 | 4 | 5 | 104 | 12 | 0·039 | 0·175 |
| Benign neoplasms and neoplasms of unspecified nature ... ... ... ... | 446 | 655 | 1,011 | 19 | 19 | 38 | 261 | 589 | 850 | 6 | 12 | 18 | 1,951 | 56 | 0·720 | 0·817 |
| | | | | | | | | | | | | | 4,426 | 332 | 1·633 | 4·841 |

## TABLE X—(*contd.*)

## DISEASES

### In-Patients—Government and Voluntary Agency Hospitals

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| Diseases | Government Hospitals | | | | | | Voluntary Agency Hospitals | | | | | | Territorial Total Cases | Territorial Total Deaths | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | | | Deaths | | | Cases | | | Deaths | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| **GROUPS III & IV** | | | | | | | | | | | | | | | | |
| *Allergic, Endocrine system, Metabolic and Nutritional Diseases, and Diseases of the Blood, and Blood-Forming Organs* | | | | | | | | | | | | | | | | |
| Nontoxic goitre ... ... ... ... | 10 | 24 | 34 | – | 1 | 1 | 25 | 30 | 55 | 1 | – | 1 | 89 | 2 | 0·033 | 0·029 |
| Thyrotoxicosis with or without goitre ... | 7 | 21 | 28 | – | – | – | 17 | 18 | 35 | 1 | 1 | 2 | 63 | 2 | 0·023 | 0·029 |
| Diabetes mellitus ... ... ... ... | 201 | 123 | 324 | 13 | 3 | 16 | 88 | 89 | 177 | 7 | 2 | 9 | 501 | 25 | 0·185 | 0·365 |
| Beriberi ... ... ... ... ... | 61 | 30 | 91 | 4 | 3 | 7 | 25 | 39 | 64 | – | 3 | 3 | 155 | 10 | 0·057 | 0·146 |
| Pellagra ... ... ... ... ... | 60 | 107 | 167 | – | 5 | 5 | 29 | 35 | 64 | 3 | 1 | 4 | 231 | 9 | 0·085 | 0·131 |
| Scurvy ... ... ... ... ... | 45 | 27 | 72 | 2 | – | 2 | 56 | 61 | 117 | 4 | 1 | 5 | 189 | 7 | 0·070 | 0·102 |
| Kwashiorkor ... ... ... ... | 499 | 481 | 980 | 52 | 49 | 101 | 566 | 445 | 1,011 | 24 | 19 | 43 | 1,991 | 144 | 0·735 | 2 100 |
| Other deficiency states ... ... ... | 411 | 642 | 1,053 | 53 | 29 | 82 | 539 | 536 | 1,075 | 9 | 12 | 21 | 2,128 | 103 | 0·785 | 1·502 |
| Anaemias—Pernicious and other hyperchromic ... ... ... ... ... | 302 | 216 | 518 | 26 | 17 | 43 | 42 | 73 | 115 | 4 | 8 | 12 | 623 | 55 | 0·230 | 0·802 |
| Anaemias—Iron deficiency hypochromic ... | 379 | 519 | 898 | 24 | 28 | 52 | 1,954 | 2,339 | 4,293 | 19 | 37 | 56 | 5,191 | 108 | 1·915 | 1·576 |
| Anaemias—Other and unspecified ... ... | 704 | 933 | 1,637 | 45 | 39 | 84 | 686 | 693 | 1,379 | 22 | 16 | 38 | 3,016 | 122 | 1·113 | 1·779 |
| Asthma ... ... ... ... ... | 726 | 553 | 1,279 | 9 | 1 | 10 | 360 | 349 | 709 | 3 | 5 | 8 | 1,988 | 18 | 0·734 | 0·262 |
| Other allergic disorders, endocrine, metabolic and blood diseases ... ... ... | 243 | 193 | 436 | 8 | – | 8 | 239 | 169 | 408 | 8 | 5 | 13 | 844 | 21 | 0·311 | 0·306 |
| | | | | | | | | | | | | | 17,009 | 626 | 6·276 | 9·129 |
| **GROUP V** | | | | | | | | | | | | | | | | |
| *Mental, Psychoneurotic and Personality Diseases* | | | | | | | | | | | | | | | | |
| Psychoses ... ... ... ... ... | 204 | 110 | 314 | 1 | – | 1 | 38 | 58 | 96 | – | 1 | 1 | 410 | 2 | 0·151 | 0·029 |
| Psychoneuroses and disorders of personality | 137 | 116 | 253 | 1 | – | 1 | 86 | 94 | 180 | – | – | – | 433 | 1 | 0·160 | 0·015 |
| Mental deficiency ... ... ... ... | 79 | 63 | 142 | – | 1 | 1 | 15 | 25 | 40 | – | – | – | 182 | 1 | 0·067 | 0·015 |
| | | | | | | | | | | | | | 1,025 | 4 | 0·378 | 0·059 |

## TABLE X—(*contd.*)

## DISEASES

### In-Patients—Government and Voluntary Agency Hospitals

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| Diseases | Government Hospitals | | | | | | Voluntary Agency Hospitals | | | | | | Territorial Total Cases | Territorial Total Deaths | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | | | Deaths | | | Cases | | | Deaths | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| **GROUP VI** | | | | | | | | | | | | | | | | |
| *Diseases of the Nervous System and Sense Organs* | | | | | | | | | | | | | | | | |
| Vascular lesions of affecting central nervous system ... ... ... ... ... | 78 | 61 | 139 | 11 | 10 | 21 | 42 | 52 | 94 | 5 | 11 | 16 | 233 | 37 | 0·086 | 0·539 |
| Nonmeningococcal meningitis ... ... | 78 | 94 | 172 | 31 | 18 | 49 | 79 | 123 | 202 | 20 | 32 | 52 | 374 | 101 | 0·138 | 1·472 |
| Multiple sclerosis ... ... ... ... | 14 | 8 | 22 | 11 | 4 | 15 | 14 | 14 | 28 | 3 | 1 | 4 | 50 | 19 | 0·018 | 0·277 |
| Epilepsy ... ... ... ... ... | 178 | 120 | 298 | 2 | 2 | 4 | 45 | 55 | 100 | 4 | – | 4 | 398 | 8 | 0·147 | 0·117 |
| Inflammatory diseases of eye ... ... | 463 | 458 | 921 | – | – | – | 593 | 697 | 1,290 | – | – | – | 2,211 | – | 0·816 | – |
| Cataract ... ... ... ... ... | 160 | 67 | 227 | – | – | – | 230 | 139 | 369 | – | – | – | 596 | – | 0·220 | – |
| Glaucoma ... ... ... ... ... | 18 | 13 | 31 | – | – | – | 52 | 39 | 91 | – | – | – | 122 | – | 0·045 | – |
| Otitis externa ... ... ... ... | 70 | 38 | 108 | 1 | – | 1 | 65 | 79 | 144 | – | 1 | 1 | 252 | 2 | 0·093 | 0·029 |
| Otitis media and mastoiditis ... ... | 176 | 97 | 273 | 8 | 9 | 17 | 264 | 231 | 495 | 6 | 2 | 8 | 768 | 25 | 0·283 | 0·365 |
| Other inflammatory diseases of ear... ... | 57 | 43 | 100 | – | – | – | 64 | 79 | 143 | – | – | – | 243 | – | 0·090 | – |
| All other diseases and conditions of eyes ... | 421 | 224 | 645 | 1 | – | 1 | 266 | 260 | 526 | – | – | – | 1,171 | 1 | 0·432 | 0·015 |
| All other diseases of the nervous system and sense organs ... ... ... ... | 365 | 249 | 614 | 14 | 5 | 19 | 179 | 166 | 345 | 8 | 4 | 12 | 959 | 31 | 0·354 | 0·452 |
| | | | | | | | | | | | | | 7,377 | 224 | 2·722 | 3·266 |
| **GROUP VII** | | | | | | | | | | | | | | | | |
| *Diseases of the Circulatory System* | | | | | | | | | | | | | | | | |
| Rheumatic fever ... ... ... ... | 159 | 121 | 280 | 1 | – | 1 | 70 | 72 | 142 | – | – | – | 422 | 1 | 0·156 | 0·015 |
| Chronic rheumatic heart disease ... ... | 53 | 39 | 92 | 7 | 6 | 13 | 51 | 66 | 117 | 7 | 7 | 14 | 209 | 27 | 0·077 | 0·394 |
| Arteriosclerotic and degenerative heart disease ... ... ... ... ... | 60 | 23 | 83 | 9 | 3 | 12 | 129 | 124 | 253 | 18 | 16 | 34 | 336 | 46 | 0·124 | 0·670 |
| Other diseases of the heart ... ... | 454 | 349 | 803 | 56 | 43 | 99 | 329 | 389 | 718 | 31 | 42 | 73 | 1,521 | 172 | 0·561 | 2·509 |
| Hypertension with heart disease ... ... | 322 | 133 | 455 | 33 | 13 | 46 | 69 | 91 | 160 | 5 | 13 | 18 | 615 | 64 | 0·227 | 0·933 |
| Hypertension without mention of heart ... | 70 | 44 | 114 | 8 | 1 | 9 | 71 | 109 | 180 | 1 | – | 1 | 294 | 10 | 0·108 | 0·146 |
| Diseases of arteries ... ... ... ... | 19 | 15 | 34 | 1 | 2 | 3 | 40 | 21 | 61 | 2 | 5 | 7 | 95 | 10 | 0·035 | 0·146 |
| Other diseases of circulatory system ... | 292 | 169 | 461 | 9 | 4 | 13 | 116 | 132 | 248 | 4 | 8 | 12 | 709 | 25 | 0·262 | 0·364 |
| | | | | | | | | | | | | | 4,201 | 355 | 1·550 | 5·177 |

# TABLE X—(*contd.*)

## DISEASES

### In-Patients—Government and Voluntary Agency Hospitals

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| Diseases | Government Hospitals | | | | | | Voluntary Agency Hospitals | | | | | | Territorial Total Cases | Territorial Total Deaths | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | | | Deaths | | | Cases | | | Deaths | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| **GROUP VIII** | | | | | | | | | | | | | | | | |
| *Diseases of the Respiratory System* | | | | | | | | | | | | | | | | |
| Acute upper respiratory infections ... | 865 | 493 | 1,358 | 5 | 1 | 6 | 586 | 731 | 1,317 | 3 | 2 | 5 | 2,675 | 11 | 0·987 | 0·160 |
| Influenza ... ... ... ... ... | 101 | 42 | 143 | 6 | 1 | 7 | 174 | 210 | 384 | – | 2 | 2 | 527 | 9 | 0·194 | 0·131 |
| Lobar pneumonia ... ... ... ... | 3,121 | 2,012 | 5,133 | 96 | 62 | 158 | 1,021 | 942 | 1,963 | 36 | 42 | 78 | 7,096 | 236 | 2·618 | 3·442 |
| Bronchopneumonia ... ... ... ... | 2,827 | 2,677 | 5,504 | 216 | 167 | 383 | 1,292 | 1,374 | 2,666 | 97 | 121 | 218 | 8,170 | 601 | 3·016 | 8·764 |
| Primary, atypical, other and unspecified pneumonia... ... ... ... ... | 223 | 190 | 413 | 18 | 12 | 30 | 258 | 273 | 531 | 13 | 6 | 19 | 944 | 49 | 0·348 | 0·714 |
| Acute Bronchitis ... ... ... ... | 1,617 | 1,337 | 2,954 | 5 | 6 | 11 | 616 | 737 | 1,353 | 3 | 1 | 4 | 4,307 | 15 | 1·589 | 0·219 |
| Bronchitis, chronic and unqualified ... | 812 | 606 | 1,418 | 8 | 4 | 12 | 406 | 423 | 829 | – | – | – | 2,247 | 12 | 0·829 | 0·175 |
| Hypertrophy of tonsils and adenoids ... | 227 | 282 | 509 | 2 | 3 | 5 | 121 | 115 | 236 | – | – | – | 745 | 5 | 0·275 | 0·073 |
| Empyema and abscess of lung ... ... | 87 | 31 | 118 | 8 | 3 | 11 | 44 | 17 | 61 | 4 | 2 | 6 | 179 | 17 | 0·066 | 0·248 |
| Pleurisy (Other than tuberculous) ... ... | 90 | 46 | 136 | 2 | – | 2 | 79 | 71 | 150 | – | – | – | 286 | 2 | 0·106 | 0·029 |
| Pneumoconiosis ... ... ... ... | 27 | 44 | 71 | 1 | 2 | 3 | 8 | 7 | 15 | 1 | – | 1 | 86 | 4 | 0·032 | 0·058 |
| All other respiratory diseases ... ... | 596 | 419 | 1,015 | 12 | 3 | 15 | 512 | 535 | 1,047 | 8 | 8 | 16 | 2,062 | 31 | 0·761 | 0·452 |
| | | | | | | | | | | | | | 29,324 | 992 | 10·821 | 14·465 |
| **GROUP IX** | | | | | | | | | | | | | | | | |
| *Diseases of the Digestive System* | | | | | | | | | | | | | | | | |
| Dental caries ... ... ... ... | 153 | 74 | 227 | – | – | – | 98 | 104 | 202 | – | – | – | 429 | – | 0·158 | – |
| All other diseases of teeth and supporting structures ... ... ... ... ... | 112 | 95 | 207 | 3 | – | 3 | 181 | 162 | 343 | – | – | – | 550 | 3 | 0·203 | 0·044 |
| Ulcer of stomach ... ... ... ... | 135 | 58 | 193 | 8 | – | 8 | 143 | 67 | 210 | – | 1 | 1 | 403 | 9 | 0·149 | 0·131 |
| Ulcer of duodenum ... ... ... ... | 85 | 22 | 107 | 4 | – | 4 | 98 | 47 | 145 | 1 | – | 1 | 252 | 5 | 0·092 | 0·073 |
| Gastritis and duodenitis ... ... ... | 331 | 220 | 551 | 1 | 4 | 5 | 243 | 205 | 448 | – | 1 | 1 | 999 | 6 | 0·369 | 0·087 |
| Appendicitis ... ... ... ... ... | 317 | 140 | 457 | 5 | 2 | 7 | 91 | 79 | 170 | 1 | – | 1 | 627 | 8 | 0·231 | 0·117 |
| Intestinal obstruction and hernia ... ... | 2,695 | 209 | 2,904 | 91 | 29 | 120 | 930 | 206 | 1,136 | 21 | 22 | 43 | 4,040 | 163 | 1·492 | 2·377 |
| (a) Gastro-emteritis and colitis—between 4 weeks and 2 years ... ... ... | 1,241 | 1,003 | 2,244 | 53 | 85 | 138 | 737 | 683 | 1,420 | 34 | 42 | 76 | 3,664 | 214 | 1·352 | 3·120 |
| (b) Gastro-enteritis and colitis—2 years and over ... ... ... ... | 1,106 | 869 | 1,975 | 49 | 16 | 65 | 477 | 491 | 968 | 11 | 17 | 28 | 2,943 | 93 | 1·086 | 1·356 |
| (c) Chronic enteritis and ulcerative colitis | 184 | 55 | 239 | 9 | – | 9 | 24 | 26 | 50 | – | – | – | 289 | 9 | 0·107 | 0·131 |
| Cirrhosis of the liver ... ... ... | 347 | 149 | 496 | 61 | 14 | 75 | 156 | 96 | 252 | 17 | 13 | 30 | 748 | 105 | 0·276 | 1·531 |
| Cholelithiasis and cholecystitis ... ... | 79 | 100 | 179 | 9 | 1 | 10 | 48 | 32 | 80 | 4 | 2 | 6 | 259 | 16 | 0·096 | 0·233 |
| Other diseases of the digestive system ... | 2,212 | 2,201 | 4,413 | 37 | 47 | 84 | 822 | 698 | 1,520 | 26 | 31 | 57 | 5,933 | 141 | 2·189 | 2·056 |
| | | | | | | | | | | | | | 21,136 | 772 | 7·800 | 11·256 |

## TABLE X—(*contd.*)

## DISEASES

### IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | | | | VOLUNTARY AGENCY HOSPITALS | | | | | | TERRITORIAL TOTAL CASES | TERRITORIAL TOTAL DEATHS | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CASES | | | DEATHS | | | CASES | | | DEATHS | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| **GROUP X** | | | | | | | | | | | | | | | | |
| *Diseases of the Genito-Urinary System* | | | | | | | | | | | | | | | | |
| Acute nephritis ... ... ... ... | 58 | 31 | 89 | 4 | 5 | 9 | 79 | 68 | 147 | 8 | 5 | 13 | 236 | 22 | 0·087 | 0·321 |
| Chronic, other and unspecified nephritis ... | 137 | 58 | 195 | 13 | 7 | 20 | 104 | 83 | 187 | 9 | 16 | 25 | 382 | 45 | 0·141 | 0·656 |
| Infections of kidney (other than tuberculous) ... ... ... ... | 62 | 31 | 93 | 4 | 1 | 5 | 77 | 94 | 171 | 4 | 2 | 6 | 264 | 1 | 0·097 | 0·160 |
| Calculi of urinary system ... ... ... | 59 | 13 | 72 | 5 | – | 5 | 43 | 13 | 56 | 1 | – | 1 | 128 | 6 | 0·047 | 0·087 |
| Hyperplasia of prostate ... ... ... | 218 | – | 227 | 11 | – | 11 | 134 | – | 137 | 5 | – | 5 | 364 | 16 | 0·134 | 0·233 |
| Diseases of breast ... ... ... ... | 5 | 300 | 305 | 2 | – | 2 | 21 | 195 | 216 | – | – | – | 521 | 2 | 0·192 | 0·029 |
| Hydrocele ... ... ... ... ... | 1,125 | – | 1,183 | 3 | – | 3 | 581 | – | 594 | 1 | – | 1 | 1,777 | 4 | 0·656 | 0·058 |
| Disorders of menstruation ... ... ... | – | 1,089 | 1,089 | – | 1 | 1 | – | 813 | 813 | – | – | – | 1,902 | 1 | 0·702 | 0·015 |
| All other diseases of the genito-urinary system ... ... ... ... ... | 1,999 | 2,498 | 4,430 | 51 | 13 | 64 | 1,179 | 2,249 | 3,412 | 6 | 3 | 9 | 7,842 | 73 | 2·895 | 1·066 |
| | | | | | | | | | | | | | 13,416 | 180 | 4·951 | 2·625 |
| **GROUP XI** | | | | | | | | | | | | | | | | |
| *Deliveries and Complications of Pregnancy, Childbirth and the Puerperium* | | | | | | | | | | | | | | | | |
| Sepsis of pregnancy, childbirth and the puerperium ... ... ... ... | – | 399 | 399 | – | 11 | 11 | – | 298 | 298 | – | 5 | 5 | 697 | 16 | 0·257 | 0·233 |
| Toxaemias of pregnancy and puerperium ... | – | 268 | 268 | – | 7 | 7 | – | 152 | 152 | – | 2 | 2 | 420 | 9 | 0·155 | 0·131 |
| Haemorrhage of pregnancy and childbirth | – | 439 | 439 | – | 16 | 16 | – | 485 | 485 | – | 10 | 10 | 924 | 26 | 0·341 | 0·379 |
| Abortion, without mention of sepsis or toxaemia ... ... ... ... ... | – | 2,369 | 2,369 | – | 4 | 4 | – | 1,154 | 1,154 | – | – | – | 3,523 | 4 | 1·300 | 0·058 |
| Abortion with sepsis ... ... ... | – | 596 | 596 | – | 3 | 3 | – | 215 | 215 | – | – | – | 811 | 3 | 0·299 | 0·044 |
| Other complications of pregnancy, childbirth and the puerperium ... ... | – | 4,530 | 4,530 | – | 89 | 89 | – | 3,424 | 3,424 | – | 53 | 53 | 7,954 | 142 | 2·935 | 2·071 |
| Delivery without complications ... ... | – | 18,302 | 18,302 | – | 2 | 2 | – | 8,004 | 8,004 | – | – | – | 26,306 | 2 | 9·708 | 0·029 |
| | | | | | | | | | | | | | 40,635 | 202 | 14·995 | 2·945 |

## TABLE X—(*contd.*)

## DISEASES

### IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | | | | VOLUNTARY AGENCY HOSPITALS | | | | | | TERRITORIAL TOTAL CASES | TERRITORIAL TOTAL DEATHS | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CASES | | | DEATHS | | | CASES | | | DEATHS | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| **GROUPS XII & XIII** | | | | | | | | | | | | | | | | |
| *Diseases of the Skin and Cellular Tissues, and Diseases of the Bone and Organs of Movement* | | | | | | | | | | | | | | | | |
| Infections of skin and subcutaneous tissue | 2,179 | 1,272 | 3,451 | 8 | 6 | 14 | 825 | 642 | 1,467 | 4 | 1 | 5 | 4,918 | 19 | 1·816 | 0·277 |
| Arthritis and spondylitis ... ... ... | 796 | 288 | 1,084 | – | – | – | 252 | 216 | 468 | 1 | – | 1 | 1,552 | 1 | 0·573 | 0·015 |
| Muscular rheumatism and rheumatism unspecified... ... ... ... | 579 | 317 | 896 | 1 | 1 | 2 | 215 | 279 | 494 | 1 | – | 1 | 1,390 | 3 | 0·513 | 0·044 |
| Osteomyelitis and periostitis ... ... | 293 | 94 | 387 | 3 | – | 3 | 114 | 73 | 187 | 1 | – | 1 | 574 | 4 | 0·212 | 0·058 |
| Ankylosis and acquired musculo-skeletal deformities... ... ... ... ... | 98 | 29 | 127 | – | – | – | 40 | 59 | 99 | – | – | – | 226 | – | 0·083 | – |
| Chronic ulcer of skin (includes tropical ulcer) ... ... ... ... ... | 1,347 | 583 | 1,930 | 4 | 1 | 5 | 562 | 422 | 984 | – | – | – | 2,914 | 5 | 1·075 | 0·073 |
| All other skin diseases ... ... ... | 626 | 326 | 952 | – | 4 | 4 | 244 | 245 | 489 | 1 | – | 1 | 1,441 | 5 | 0·532 | 0·073 |
| All other diseases of the musculo-skeletal system ... ... ... ... ... | 1,083 | 654 | 1,737 | 18 | 17 | 35 | 241 | 196 | 437 | 1 | – | 1 | 2,174 | 36 | 0·802 | 0·524 |
| | | | | | | | | | | | | | 15,189 | 73 | 5·606 | 1·064 |
| **GROUP XIV** | | | | | | | | | | | | | | | | |
| *Congenital Malformations* | | | | | | | | | | | | | | | | |
| Spina bifida and meningocele ... ... | 13 | 15 | 28 | 2 | 4 | 6 | 7 | 9 | 16 | 1 | – | 1 | 44 | 7 | 0·016 | 0·102 |
| Congenital malformations of circulatory system ... ... ... ... ... | 7 | 23 | 30 | 1 | 1 | 2 | 9 | 8 | 17 | 2 | 2 | 4 | 47 | 6 | 0·017 | 0·087 |
| All other congenital malformations ... | 63 | 65 | 128 | 6 | 3 | 9 | 80 | 102 | 182 | 4 | 4 | 8 | 310 | 17 | 0·114 | 0·249 |
| | | | | | | | | | | | | | 401 | 30 | 0·147 | 0·438 |
| **GROUP XV** | | | | | | | | | | | | | | | | |
| *Certain Diseases of Early Infancy* | | | | | | | | | | | | | | | | |
| Birth injuries ... ... ... ... | 6 | 12 | 18 | – | – | – | 47 | 41 | 88 | 15 | 12 | 27 | 106 | 27 | 0·039 | 0·394 |
| Postnatal asphyxia atelectasis ... ... | 4 | 6 | 10 | 2 | 4 | 6 | 79 | 76 | 155 | 8 | 15 | 23 | 165 | 29 | 0·061 | 0·423 |
| (a) Diarrhoea of newborn (under 4 weeks) | 66 | 73 | 139 | 5 | 1 | 6 | 86 | 30 | 116 | 8 | 2 | 10 | 255 | 16 | 0·094 | 0·233 |
| (b) Ophthalmia neonatorum ... ... | 17 | 19 | 36 | – | – | – | 33 | 41 | 74 | – | – | – | 110 | – | 0·041 | – |
| (c) Other infections of newborn ... ... | 8 | 28 | 36 | 2 | 2 | 4 | 30 | 26 | 56 | 3 | 1 | 4 | 92 | 8 | 0·034 | 0·117 |

## TABLE X—(*contd.*)

## DISEASES

### IN-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | | | | VOLUNTARY AGENCY HOSPITALS | | | | | | TERRITORIAL TOTAL CASES | TERRITORIAL TOTAL DEATHS | Percentage Morbidity | Percentage Mortality |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CASES | | | DEATHS | | | CASES | | | DEATHS | | | | | | |
| | M | F | Total | M | F | Total | M | F | Total | M | F | Total | | | | |
| Haemolytic disease of newborn ... ... | 8 | 1 | 9 | 1 | – | 1 | 4 | 7 | 11 | 1 | 1 | 2 | 20 | 3 | 0·007 | 0·044 |
| All other defined diseases of early infancy ... | 17 | 30 | 47 | 5 | 8 | 13 | 76 | 134 | 210 | 5 | 4 | 9 | 257 | 22 | 0·095 | 0·320 |
| Ill-defined diseases peculiar to early infancy and immaturity (all types) ... ... | 69 | 90 | 159 | 21 | 28 | 49 | 349 | 464 | 813 | 87 | 80 | 167 | 972 | 216 | 0·359 | 3·149 |
| | | | | | | | | | | | | | 1,977 | 321 | 0·730 | 4·680 |
| GROUP XVI | | | | | | | | | | | | | | | | |
| *Symptoms, Senility and Ill-defined Conditions* | | | | | | | | | | | | | | | | |
| Senility without mention of psychosis ... | 213 | 183 | 396 | 17 | 7 | 24 | 54 | 130 | 184 | 16 | 9 | 25 | 580 | 49 | 0·214 | 0·714 |
| (a) Pyrexia of unkown origin ... ... | 3,704 | 2,773 | 6,477 | 79 | 65 | 144 | 753 | 945 | 1,698 | 25 | 24 | 49 | 8,175 | 193 | 3·016 | 2·815 |
| (b) Observation, without need for further medical care ... ... ... ... | 803 | 858 | 1,661 | 19 | 13 | 32 | 512 | 948 | 1,460 | 2 | 2 | 4 | 3,121 | 36 | 1·153 | 0·525 |
| (c) All other ill-defined causes of morbidity | 774 | 589 | 1,363 | 14 | 12 | 26 | 394 | 406 | 800 | 23 | 23 | 46 | 2,163 | 72 | 0·798 | 1·050 |
| | | | | | | | | | | | | | 14,039 | 350 | 5·181 | 5·104 |
| GROUP XVII | | | | | | | | | | | | | | | | |
| *Accidents, Poisoning and Violence* | | | | | | | | | | | | | | | | |
| Fracture of skull ... ... ... ... | 130 | 34 | 164 | 30 | 12 | 42 | 140 | 11 | 151 | 9 | 1 | 10 | 315 | 52 | 0·116 | 0·758 |
| Fracture of spine and trunk... ... ... | 206 | 21 | 227 | 11 | 2 | 13 | 112 | 17 | 129 | 1 | – | 1 | 356 | 14 | 0·131 | 0·204 |
| Fracture of limbs ... ... ... ... | 2,564 | 856 | 3,420 | 15 | 7 | 22 | 647 | 220 | 867 | – | 1 | 1 | 4,287 | 23 | 1·583 | 0·335 |
| Dislocation without fracture ... ... | 391 | 176 | 567 | 2 | – | 2 | 104 | 30 | 134 | – | – | – | 701 | 2 | 0·259 | 0·029 |
| Sprains and strains of joints and adjacent muscles ... ... ... ... ... | 687 | 187 | 874 | 1 | – | 1 | 173 | 90 | 263 | – | – | – | 1,137 | 1 | 0·420 | 0·015 |
| Head injury (excluding fracture) ... ... | 332 | 86 | 418 | 28 | 7 | 35 | 220 | 34 | 254 | 3 | – | 3 | 672 | 38 | 0·248 | 0·554 |
| Internal injury of chest, abdomen and pelvis ... ... ... ... ... | 113 | 115 | 228 | 13 | 4 | 17 | 44 | 15 | 59 | 7 | 2 | 9 | 287 | 26 | 0·106 | 0·379 |
| Laceration and open wounds ... ... | 3,347 | 1,136 | 4,483 | 19 | 9 | 28 | 718 | 292 | 1,010 | 6 | – | 6 | 5,493 | 34 | 2·026 | 0·496 |
| Superficial injury, contusion and crushing with intact skin surface ... ... ... | 1,012 | 386 | 1,398 | 13 | 9 | 22 | 210 | 145 | 355 | 3 | 2 | 5 | 1,753 | 27 | 0·647 | 0·394 |
| Effects of foreign body entering through orifice ... ... ... ... ... | 147 | 70 | 217 | 1 | – | 1 | 98 | 54 | 152 | 3 | 1 | 4 | 369 | 5 | 0·136 | 0·073 |
| Burns ... ... ... ... ... | 704 | 480 | 1,184 | 37 | 20 | 57 | 228 | 179 | 407 | 17 | 9 | 26 | 1,591 | 83 | 0·587 | 1·210 |
| Effects of poisons ... ... ... ... | 360 | 221 | 581 | 14 | 12 | 26 | 209 | 145 | 364 | 22 | 17 | 39 | 935 | 65 | 0·345 | 0·948 |
| All other and unspecified effects of external causes ... ... ... ... ... | 540 | 272 | 812 | 24 | 1 | 25 | 235 | 131 | 366 | 5 | 15 | 20 | 1,178 | 45 | 0·435 | 0·656 |
| | | | | | | | | | | | | | 19,074 | 415 | 7·039 | 6·051 |
| GRAND TOTALS ... | 79,549 | 81,749 | 161,298 | 2,531 | 1,657 | 4,188 | 46,242 | 63,464 | 109,706 | 1,336 | 1,334 | 2,670 | 271,004 | 6,858 | – | – |

# TABLE XI

## DISEASES

### OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | VOLUNTARY AGENCY HOSPITALS | | | Territorial Total | Group Total | Percentage Morbidity in Groups |
|---|---|---|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total | | | |
| GROUP I | | | | | | | | | |
| *Infective and Parastic Diseases (and influenza, all types meningitis and eye diseases)* | | | | | | | | | |
| Tuberculosis of the respiratory system ... ... | 1,889 | 1,182 | 3,071 | 783 | 577 | 1,360 | 4,431 | | 0·191 |
| Other Tuberculous diseases ... ... ... | 476 | 361 | 837 | 110 | 75 | 185 | 1,022 | | 0·044 |
| Syphilis ... ... ... ... ... ... | 4,760 | 3,104 | 7.864 | 1,382 | 900 | 2,282 | 10,146 | | 0·437 |
| Gonorrhoea ... ... ... ... ... | 27,930 | 12,020 | 39,950 | 4,329 | 4,257 | 8,586 | 48,536 | | 2·093 |
| Other venereal diseases ... ... ... ... | 2,458 | 1,757 | 4,215 | 126 | 1,357 | 1,483 | 5,698 | | 0·246 |
| Fevers of uncertain origin ... ... ... | 116,873 | 98,526 | 215,399 | 9,733 | 7,643 | 17,376 | 232,775 | | 10·037 |
| Bacillary dysentery... ... ... ... ... | 5,853 | 5,186 | 11,039 | 916 | 2,607 | 3,523 | 14,562 | | 0·628 |
| Amoebiasis ... ... ... ... ... ... | 510 | 456 | 966 | 530 | 762 | 1,292 | 2,258 | | 0·097 |
| Other dysenteries ... ... ... ... ... | 14,657 | 10,597 | 25,254 | 2,047 | 1,616 | 3,663 | 28,917 | | 1·247 |
| Diphtheria ... ... ... ... ... ... | 231 | 264 | 495 | 14 | 10 | 24 | 519 | | 0·022 |
| Whooping Cough ... ... ... ... ... | 4,245 | 4,351 | 8,596 | 1,969 | 1,739 | 3,708 | 12,304 | | 0·531 |
| Meningitis ... ... ... ... ... ... | 37 | 23 | 60 | 20 | 36 | 56 | 116 | | 0·005 |
| Plague ... ... ... ... ... ... | – | – | – | – | – | – | – | | – |
| Leprosy ... ... ... ... ... ... | 1,345 | 941 | 2,286 | 676 | 572 | 1,248 | 3,534 | | 0·152 |
| Tetanus ... ... ... ... ... ... | 36 | 34 | 70 | 14 | 8 | 22 | 92 | | 0·004 |
| Anthrax ... ... ... ... ... ... | 124 | 99 | 223 | 16 | 10 | 26 | 249 | | 0·011 |
| Relapsing Fever ... ... ... ... ... | 387 | 340 | 727 | 276 | 312 | 588 | 1,315 | | 0·057 |
| Yaws ... ... ... ... ... ... | 1,954 | 1,367 | 3,321 | 364 | 345 | 709 | 4,030 | | 0·174 |
| Acute Poliomyelitis ... ... ... ... | 75 | 97 | 172 | 88 | 61 | 149 | 321 | | 0·014 |
| Smallpox:— | | | | | | | | | |
| (a) Variola Major ... ... ... ... | 48 | 30 | 78 | – | 4 | 4 | 82 | | 0·004 |
| (b) Variola Minor ... ... ... ... | 49 | 64 | 113 | 22 | 16 | 38 | 151 | | 0·007 |
| Measles ... ... ... ... ... ... | 7,664 | 8,295 | 15,959 | 1,195 | 1,354 | 2,549 | 18,508 | | 0·798 |
| Chickenpox ... ... ... ... ... | 4,893 | 4,098 | 8,991 | 439 | 248 | 687 | 9,678 | | 0·417 |
| Mumps ... ... ... ... ... ... | 3,939 | 2,946 | 6,885 | 217 | 193 | 410 | 7,295 | | 0·314 |
| Yellow Fever ... ... ... ... ... | – | – | – | – | – | – | – | | – |
| Rabies ... ... ... ... ... ... | – | – | – | – | – | – | – | | – |
| Trachoma ... ... ... ... ... ... | 1,384 | 1,286 | 2,670 | 514 | 472 | 986 | 3,656 | | 0·158 |
| Typhus and other rickettsial diseases ... ... | 4 | 8 | 12 | 6 | 4 | 10 | 22 | | – |

## TABLE XI—(*contd.*)

## DISEASES

### OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | VOLUNTARY AGENCY HOSPITALS | | | Territorial Total | Group Total | Percentage Morbidity in Groups |
|---|---|---|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total | | | |
| Malaria:— | | | | | | | | | |
| (a) Benign Tertian ... ... ... ... | 2,695 | 2,619 | 5,314 | 8,723 | 9,182 | 17,905 | 23.219 | | 1·001 |
| (b) Quartan ... ... ... ... ... | 696 | 692 | 1,388 | 865 | 813 | 1,678 | 3,066 | | 0·132 |
| (c) Subtertian ... ... ... ... ... | 22,217 | 18,193 | 40,410 | 21,255 | 18,685 | 39,940 | 80,350 | | 3·464 |
| (d) Unclassified ... ... ... ... ... | 42,589 | 32,811 | 75,400 | 11,503 | 12,576 | 24,079 | 99,479 | | 4·289 |
| Blackwater fever ... ... ... ... ... | 1 | 2 | 3 | 1 | – | 1 | 4 | | – |
| Trypanosomiases ... ... ... ... ... | 11 | 15 | 26 | 1 | – | 1 | 27 | | – |
| Schistosomiasis:— | | | | | | | | | |
| (a) Vesical (haematobium) ... ... ... | 15,310 | 8,720 | 24,030 | 4,062 | 3,582 | 7,644 | 31,674 | | 1·366 |
| (b) Intestinal (mansoni) ... ... ... | 1,017 | 761 | 1,778 | 655 | 825 | 1,480 | 3,258 | | 0·140 |
| Tapeworm:— ... ... ... ... ... | 3,094 | 2,587 | 5,681 | 906 | 1,102 | 2,008 | 7,689 | | 0·332 |
| (a) Filariasis (bancrofti) ... ... ... | 328 | 146 | 474 | 61 | 34 | 95 | 569 | | 0·025 |
| (b) Onchocerciasis ... ... ... ... | 19 | – | 19 | 7 | 210 | 217 | 236 | | 0·010 |
| Ankylostomiasis ... ... ... ... ... | 12,133 | 11,122 | 23,255 | 7,594 | 9,505 | 17,099 | 40,354 | | 1·740 |
| Ascariasis ... ... ... ... ... ... | 7,001 | 6,546 | 13,547 | 3,830 | 4,386 | 8,216 | 21,763 | | 0·938 |
| Guinea Worm (dracunculosis) ... ... ... | 45 | 49 | 94 | 27 | 31 | 58 | 152 | | 0·007 |
| Tinea ... ... ... ... ... ... ... | 6,278 | 3,038 | 9,316 | 727 | 460 | 1,187 | 10,503 | | 0·453 |
| Scabies ... ... ... ... ... ... ... | 13,893 | 13,600 | 27,493 | 2,848 | 3,009 | 5,857 | 33,350 | | 1·438 |
| All other infective and parasitic diseases ... | 8,804 | 6,450 | 15,254 | 2,185 | 2,246 | 4,431 | 19,685 | | 0·849 |
| | | | | | | | | 785,595 | 33·872 |
| **GROUP II** | | | | | | | | | |
| *Neoplasms* | | | | | | | | | |
| Malignant neoplasms ... ... ... ... | 83 | 89 | 172 | 90 | 148 | 258 | 410 | | 0·018 |
| Non-malignant ... ... ... ... ... | 572 | 539 | 1,111 | 118 | 548 | 666 | 1,777 | | 0·076 |
| Unspecified ... ... ... ... ... ... | 292 | 309 | 601 | 108 | 147 | 255 | 856 | | 0·037 |
| | | | | | | | | 3,043 | 0·131 |

## TABLE XI—(*contd.*)

## DISEASES

### Out-Patients—Government and Voluntary Agency Hospitals

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| Diseases | Government Hospitals | | | Voluntary Agency Hospitals | | | Territorial Total | Group Total | Percentage Morbidity in Groups |
|---|---|---|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total | | | |
| GROUP III | | | | | | | | | |
| *Allergic, Endocrine system, Metabolic and Nutritional Diseases* | | | | | | | | | |
| Asthma ... ... ... ... ... ... | 4,273 | 2,587 | 6,860 | 789 | 579 | 1,368 | 8,228 | | 0·355 |
| Diabetes ... ... ... ... ... ... | 255 | 167 | 422 | 68 | 39 | 107 | 529 | | 0·023 |
| Vitamin deficiency states ... ... ... ... | 8,272 | 7,051 | 15,323 | 2,610 | 2,850 | 5,460 | 20,783 | | 0·896 |
| Kwashiorkor ... ... ... ... ... | 2,776 | 2,380 | 5,156 | 775 | 897 | 1,672 | 6,828 | | 0·294 |
| Other allergic, endocrine system, metabolic and nutritional diseases ... ... ... ... | 6,925 | 5,697 | 12,622 | 1,457 | 1,295 | 2,752 | 15,374 | | 0·663 |
| | | | | | | | | 51,742 | 2·231 |
| GROUP IV | | | | | | | | | |
| *Diseases of the blood and Blood—Forming Organs* | | | | | | | | | |
| All diseases of the blood and blood—forming organs ... ... ... ... ... ... | 4,299 | 4,164 | 8,463 | 3,221 | 5,267 | 8,488 | 16,951 | | 0·731 |
| | | | | | | | | 16,951 | 0·731 |
| GROUPS V & VI | | | | | | | | | |
| *Mental, Psychoneurotic and Personality Diseases, and Diseases of the Nervous System and Sense Organs* | | | | | | | | | |
| Mental disorders ... ... ... ... ... | 245 | 196 | 441 | 107 | 112 | 219 | 660 | | 0·028 |
| Cerebral haemorrhage ... ... ... ... | 13 | 2 | 15 | 19 | 5 | 24 | 39 | | 0·002 |
| Epillepsy ... ... ... ... ... ... | 307 | 156 | 463 | 156 | 63 | 219 | 682 | | 0·029 |
| Other diseases of nervous system ... ... | 4,749 | 3,450 | 8,199 | 1,794 | 599 | 2,393 | 10,592 | | 0·457 |
| Inflammatory and other diseases of eye and annexa except trachoma ... ... ... | 41,450 | 34,222 | 75,672 | 7,433 | 6,820 | 14,253 | 89,925 | | 3·877 |
| Diseases of ears and mastoid ... ... ... | 20,111 | 15,359 | 35,470 | 2,956 | 4,240 | 7,196 | 42,666 | | 1·840 |
| | | | | | | | | 144,564 | 6·233 |

## TABLE XI—(*contd.*)

## DISEASES

### OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | VOLUNTARY AGENCY HOSPITALS | | | Territorial Total | Group Total | Percentage Morbidity in Groups |
|---|---|---|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total | | | |
| **GROUP VII** | | | | | | | | | |
| *Diseases of the Circulatory System* | | | | | | | | | |
| (a) Heart disease ... ... ... ... ... | 723 | 568 | 1,300 | 1,435 | 2,232 | 3,667 | 4,967 | | 0·214 |
| (b) Other circulatory diseases ... ... ... | 2,295 | 1,038 | 3,333 | 1,018 | 406 | 1,424 | 4,757 | | 0·205 |
| | | | | | | | | 9,724 | 0·419 |
| **GROUP VIII** | | | | | | | | | |
| *Diseases of the Respiratory System* | | | | | | | | | |
| Pneumonia ... ... ... ... ... ... | 7,842 | 7,363 | 15,205 | 4,841 | 2,668 | 7,509 | 22,714 | | 0·979 |
| Other diseases of respiratory system ... ... | 165,255 | 140,428 | 305,683 | 15,906 | 16,858 | 32,764 | 338,447 | | 14·594 |
| | | | | | | | | 361,161 | 15·573 |
| **GROUP IX** | | | | | | | | | |
| *Diseases of the Digestive System* | | | | | | | | | |
| Of Teeth, and supporting structures:— | | | | | | | | | |
| (a) Caries ... ... ... ... ... | 18,064 | 13,450 | 31,514 | 2,439 | 4,652 | 7,091 | 38,605 | | 1·665 |
| (b) Other conditions ... ... ... ... | 8,703 | 5,341 | 14,044 | 834 | 1,134 | 1,968 | 16,012 | | 0·690 |
| Appendicitis ... ... ... ... ... | 77 | 72 | 149 | 61 | 146 | 207 | 356 | | 0·015 |
| Intestinal obstruction and hernia ... ... | 1,857 | 214 | 2,071 | 687 | 104 | 791 | 2,862 | | 0·123 |
| Gastro-enteritis:— | | | | | | | | | |
| (a) Between 4 weeks and 2 years ... ... | 13,475 | 12,700 | 26,175 | 2,072 | 1,979 | 4,051 | 30,226 | | 1·303 |
| (b) 2 years and over ... ... ... ... | 13,751 | 11,764 | 25,515 | 1,158 | 1,729 | 2,887 | 28,402 | | 1·225 |
| Cirrhosis of liver ... ... ... ... ... | 194 | 91 | 285 | 60 | 246 | 306 | 591 | | 0·025 |
| Other diseases of liver and bile passages ... | 862 | 410 | 1,272 | 612 | 276 | 887 | 2,159 | | 0·093 |
| Other diseases of digestive system ... ... | 105,848 | 100,605 | 206,453 | 7,172 | 8,491 | 15,663 | 222,116 | | 9·579 |
| | | | | | | | | 341,329 | 14·718 |

## TABLE XI—(*contd.*)

## DISEASES

### OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctors only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | VOLUNTARY AGENCY HOSPITALS | | | Territorial Total | Group Total | Percentage Morbidity in Groups |
|---|---|---|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total | | | |
| GROUP X | | | | | | | | | |
| *Diseases of the Genito-Urinary System* | | | | | | | | | |
| Nephritis ... ... ... ... ... ... | 125 | 111 | 236 | 478 | 95 | 573 | 809 | | 0·035 |
| Other diseases of Genito-Urinary System ... | 22,065 | 23,419 | 45,484 | 3,894 | 8,414 | 12,308 | 57,792 | | 2·491 |
| | | | | | | | | 58,601 | 2·526 |
| GROUP XI | | | | | | | | | |
| *Complications of Pregnancy, Childbirth and the Puerperium* | | | | | | | | | |
| (a) Toxaemias of pregnancy ... ... ... | – | 594 | 594 | – | 251 | 251 | 845 | | 0·036 |
| (b) Abortion ... ... ... ... ... | – | 851 | 851 | – | 590 | 590 | 1,441 | | 0·062 |
| (c) Other conditions of the puerperal state ... | – | 3,201 | 3,201 | – | 3,077 | 3,077 | 6,278 | | 0·271 |
| | | | | | | | | 8,564 | 0·369 |
| GROUPS XII & XIII | | | | | | | | | |
| *Diseases of the Skin and Cellular Tissue, and Diseases of Bones and Organs of Locomotion* | | | | | | | | | |
| Ulcers ... ... ... ... ... ... | 69,189 | 36,625 | 105,814 | 8,500 | 6,144 | 14,644 | 120,458 | | 5·193 |
| Rheumatic conditions ... ... ... ... | 28,260 | 24,108 | 52,368 | 3,372 | 3,505 | 6,877 | 59,245 | | 2·555 |
| Other diseases of bones, skin, and musculoskeletal system ... ... ... ... ... ... | 43,051 | 35,127 | 78,178 | 5,422 | 4,701 | 10,123 | 88,301 | | 3·807 |
| | | | | | | | | 268,004 | 11·555 |

## TABLE XI—(*contd.*)

## DISEASES

### OUT-PATIENTS—GOVERNMENT AND VOLUNTARY AGENCY HOSPITALS

(Hospitals with resident doctor only—1st January, 1962 to 31st December, 1962)

| DISEASES | GOVERNMENT HOSPITALS | | | VOLUNTARY AGENCY HOSPITALS | | | Territorial Total | Group Total | Percentage Morbidity in Groups |
|---|---|---|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total | | | |
| GROUPS XIV & XV | | | | | | | | | |
| *Congenital Malformations and certain Diseases of Early Infancy* | | | | | | | | | |
| (a) Diarrhoea of new-born ... ... ... | 1,010 | 924 | 1,934 | 149 | 134 | 283 | 2,217 | | 0·096 |
| (b) Ophthalmia neonatorum ... ... ... | 162 | 145 | 307 | 36 | 32 | 68 | 375 | | 0·016 |
| (c) Immaturity ... ... ... ... ... | 34 | 49 | 83 | 70 | 83 | 153 | 236 | | 0·010 |
| (d) All other malformations and diseases of early infancy ... ... ... ... ... | 229 | 249 | 478 | 230 | 280 | 510 | 988 | | 0·043 |
| | | | | | | | | 3,816 | 0·165 |
| GROUP XVI | | | | | | | | | |
| *Senility and Ill-Defined Conditions* | | | | | | | | | |
| Senility ... ... ... ... ... ... | 508 | 473 | 981 | 96 | 53 | 149 | 1,130 | | 0·049 |
| All other ill-defined causes of morbidity ... | 12,088 | 11,821 | 23,909 | 2,067 | 2,682 | 4,749 | 28,658 | | 1·235 |
| | | | | | | | | 29,788 | 1·284 |
| GROUP XVII | | | | | | | | | |
| *Accidents, Poisoning and Violence* | | | | | | | | | |
| Fractures and dislocations ... ... ... | 3,970 | 1,985 | 5,955 | 505 | 260 | 765 | 6,720 | | 0.290 |
| Injuries ... ... ... ... ... ... | 2,759 | 1,708 | 4,467 | 667 | 487 | 1,154 | 5,621 | | 0.242 |
| Other wounds and superficial injuries (excluding burns) ... ... ... ... ... ... | 48,876 | 22,902 | 71,778 | 8,674 | 5,327 | 14,001 | 85,779 | | 3.699 |
| Burns and scalds ... ... ... ... ... | 5,934 | 5,121 | 11,055 | 1,024 | 932 | 1,956 | 13,011 | | 0.561 |
| Poisons ... ... ... ... ... ... | 206 | 177 | 383 | 22 | 32 | 54 | 437 | | 0.019 |
| All other injuries from external causes ... ... | 23,480 | 9,653 | 33,133 | 2,786 | 1,585 | 4,371 | 37,504 | | 1.617 |
| Examinations ... ... ... ... ... | 19,869 | 12,148 | 32,017 | 21,564 | 33,722 | 55,286 | 87,303 | | 3.765 |
| | | | | | | | | 236,375 | 10.193 |
| TOTALS ... | 1,053,344 | 826,586 | 1,879,930 | 210,588 | 228,739 | 439,327 | 2,319,257 | 2,319,257 | |